

skin diver

\$2.00
IN CANADA
\$2.50



SEPTEMBER 1984

**BVI-
Newest Hot
Spot in
the
Caribbean**

**SPANISH COVE
Go First Class**

**THE DIVERS FLAG
Will we lose it?**

**LAVENDER LOBSTER
First Photos - New Species**

**CALIFORNIA'S BEE ROCK
Outpost for Adventure**

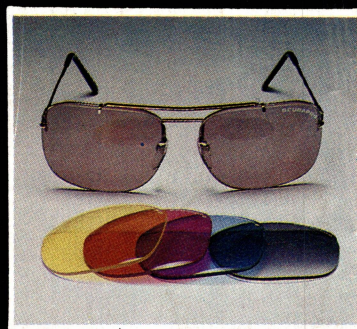
**SUNKEN SUB
Yields Treasure**



Lite Gear

WORKS GREAT WITH LESS WEIGHT

New, lightweight MACROLIGHT emits an intense, tight beam that lasts for hours. Simple, durable, O-ring sealed and guaranteed leakproof to depths no diver will ever go. MACROLIGHT features a heavy duty accessory belt clip, and rich looking knurled handle for a comfortable grip. Set your own pace with fashionable Scubapro "SIGNATURE" SPORTGLASSES. The scientifically designed lens quickly adapt to changing light conditions by dramatically reducing water reflection and sun glare. Winner of the prestigious Australian Design Award, the lens meet strict FDA standards. Available in two frame styles with five colors of tinted lens. Scubapro's lightweight, folding POCKET DIVERS KNIFE is all stainless steel with a 3" blade of 400 series stainless to hold a sharp edge. The heavy duty blade locks in place when open. Great for saltwater sports. Scubapro's GEAR BAGS offer the latest in gear bag sophistication, comfortable handling, caring and maximum storage of diving gear.



Made of heavy duty, water repellent Coroura[®] nylon with non-corrosive zippers, the gear bags come in a variety of styles and sizes with unique Scubapro features, such as a separate fin pocket, extra accessory pockets, mesh side panels to air and drain gear and extra padding for use as a backpack. From the Maximum Protection Regulator Bag to the Jumbo Gear Bag, the fashionably designed bags are on display at your nearest Scubapro dealer.



And while you're there, pick up your copy of Scubapro's new Diving Adventure Magazine and 100 page Equipment Selective Guide.



SCUBAPRO[®]

3105 E. Harcourt
Rancho Dominguez, CA
90221

These new Heuer dive watches are worth their weight in gold.

The beauty of Heuer's new gold-plated dive watches is obvious at a glance.

But their true value will really become apparent when you're deep beneath the waves.

Water-resistant to 660 feet, these rugged Heuer watches have outer turning bezels with click stops, and luminous dials for easy underwater reading.

Most important, they're Heuers on the inside, which means they keep precise time, dive after dive.

Ever since we built the first Heuer in 1860, we've had a reputation for accuracy and reliability.

That's why Heuer has so often been chosen as official timer at the Olympic Games. And that's probably why more and more divers are choosing Heuer every year.

In addition to our gold-plate series, you can also choose from our stainless steel, combination stainless steel/gold-plate and our popular Black Coral series. And now we're offering a whole new

series of watches with phosphorescent dials: the Night Divers.

Whichever you choose, you'll have the security of knowing that 120 years of experience is diving with you.

Service, if you need it, is guaranteed worldwide.

For a free color brochure and the name of the Heuer dealer nearest you, call or write to: Heuer Time & Electronics Corp., 960 South Springfield Avenue, Springfield, NJ 07081. Phone (201) 467-1890.

World leader in stopwatches.



Ref. 980.022



Ref. 980.017

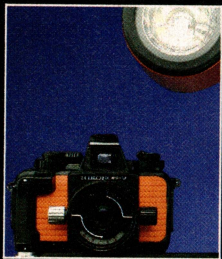


Ref. 984.013

In Hawaii: PB Sales, 1249 South Beretania Street, Honolulu, Hawaii 96814, (808) 526-3202.
In Canada: Chronometric Co., Ltd., 10271 Yonge Street, Richmond Hill, Ontario, L4C 3B5, (416) 883-5131.
In England: Heuer Time (UK) Ltd., 5L, Churchgate, Bolton BL 1 L LY, Great Britain.
International: Heuer-Leonidas SA., 2501 Bienne, Switzerland.

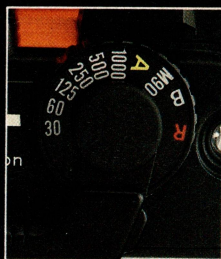
circle #102 on Reader Service Card

New! TTL Flash Metering



Automatic through-the-lens flash metering gives you precise exposures with the new Nikon SB-102 Speedlight.

New! Manual Shutter Speed Control



Shutter speeds from 1/30 to 1/1000 second give you creative control through precise exposure compensations.

New! LED Viewfinder Display



Even in manual or automatic mode you'll easily see the shutter speed displayed via bright LED's.

Accepts all current Nikonos lenses and accessories. Larger, easy-to-read frame counter. A new super secure camera back lock and a newly designed O-ring seal assures even greater water-tight integrity. For further information please contact Nikon Inc., 623 Stewart Avenue, Garden City, N.Y. 11530. Lit/Pak #56.

New Nikonos-V. The best gets better.



Nikon
We take the world's
greatest pictures.

© 1984 NIKON INC.

Circle # 103 on Reader Service Card

skin diver

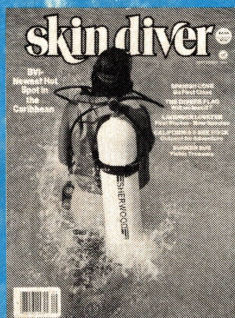
Volume Thirty-three Number Nine

FEATURES

LOCAL DIVING	14	BEE ROCK	JIM COOLURIS	Photogenic pinnacles off California's Santa Rosa Island		
	72	DIVERS UNLIMITED	STEVE LUCAS	The extra touch in Ft. Lauderdale		
	100	DIVING WESTERN NEW YORK	SVEN STAU	Lakes, rivers, wrecks and relics		
PHOTOGRAPHY	16	EWING MASTER HOUSING	STEPHEN FRINK			
	22	FISHEYE PHOTO CONTEST WINNERS	STEVE LUCAS			
	50	SUCCESSFUL UNDERWATER VIDEO	JERRY SCHNABEL			
MARINE LIFE	18	THE LAVENDER LOBSTER	HELMUT DEBELIUS	Bali beauty		
	40	THE SIXGILL SHARK	JEFF MARLIAVE	Unusual animal/rare encounter		
WRECK DIVING	28	THE S.37	STEVE GILES	Diving a WW II submarine off San Diego		
	57	SAGA OF THE MADISON	SCOT SMITH	North Florida riverboat		
	86	NEW JERSEY WRECKS	JOHN SCALIA, JR.	Eight of the best		
	110	THE BAYRANTO	J.E. REILLY	Mecca for divers on the Gulf Coast		
	112	THE USS GREGORY	STEVE GILES AND BONNIE J. CARDONE	Old sailors never die		
POLITICAL	30	DIVERS FLAG SAVED	ELLSWORTH BOYD	You did it—congratulations!		
DIVE EQUIPMENT	49	U.S. DIVERS PRO KNIVES III AND IV	MARTY SNYDERMAN			
	53	MARES TRAVEL POLESPEAR	ERIC HANAUER			
	54	IKELITE PRO-S COMPASS	GEORGE COZENS			
	55	HARVEY'S AQUA CAPSULE II DRY SUIT	FRED FISCHER			
	56	DIVE-MED FIRST AID KIT	BONNIE J. CARDONE			
	115	TABATA TUSA FIN	JIM WALKER			
FOREIGN TRAVEL	59	BVI DIVE GUIDE	JIM AND CATHY CHURCH	Unspoiled isles of beauty and boundless variety		
	69	SPANISH COVE	BARBARA A. CURRIE	Cayman's most elegant dive resort		
	80	CHRISTMAS ISLAND	WARD GRAESSLE	World's largest coral atoll		
EDUCATION/SAFETY	96	POCKET MASK RESCUE	DENNIS GRAVER	In-water artificial respiration		
DEPARTMENTS	8	WRECK FACTS	32	SHOPPER'S GUIDE	46	FISH OF THE MONTH
	11	SCUBA QUIZ	44	DIVER'S CALENDAR	89	TECHNIFACTS
	24	FILM FESTIVALS			106	Rx FOR DIVERS
		'N SYMPOSIUMS			116	DIVER'S DIRECTORY

COVER

Leap into the warm, turquoise waters of the Caribbean and join SKIN DIVER Magazine on a tour of the best dives sites, accommodations and facilities in the British Virgin Islands. Photo/Geri Murphy.



SKIN DIVER Magazine, (ISSN 0037-6345) Copyright 1984 by PETERSEN PUBLISHING COMPANY. All rights reserved. Published monthly by Petersen Publishing Company, 8490 Sunset Blvd., Los Angeles, California 90069. Second Class postage paid at Los Angeles, CA and at additional mailing offices. Single copy \$2.00. Subscription inquiries phone (213) 657-5100. Subscription rates: U.S. Possessions one year \$11.94. All other countries one year \$17.94. CONTRIBUTIONS: Should be mailed to 8490 Sunset Blvd., Los Angeles, California 90069. They must be accompanied by return postage and we assume no responsibility for loss or damage thereto. Any material accepted is subject to such revision as is necessary in our sole discretion to meet the requirements of this publication. Upon acceptance, payment will be made at our current rate, which covers the author's and/or contributors right, title and interest in and to the material mailed including but not limited to photos, drawings, charts, and designs, which shall be considered as text. The act of mailing a manuscript and/or material shall constitute an express warranty by the contributor that the material is original and in no way an infringement upon the rights of others. CHANGE OF ADDRESS: Six weeks notice is required to change a subscriber's address. Please give both old and new address and label. Mail to P.O. Box 3295, Los Angeles, CA 90078. POSTMASTER: Send address change to Skin Diver Magazine, P.O. Box 3295, Los Angeles, California 90078.

SDM Editorial

BY THE PUBLISHER



PLANNING A DIVE VACATION

appropriate dive resort? Strange as it may sound, start by reading the travel ads in SKIN DIVER. An average issue carries approximately 130 of these, ranging in size from a full page down to a tiny listing in the Where-To-Go section.

Resorts that advertise in a magazine such as SKIN DIVER are making a strong statement of commitment. They really want your business. They have spent a lot of money simply to tell you that divers are welcome at their resorts and that they are eager to have you as a guest. It is these advertisers who generally offer the best services and the best facilities.

Send for brochures: Once you have perused the ads in current and past issues of SKIN DIVER, select 6 to 12 of the most interesting spots and send for brochures and price quotes. Although it may take you some time to get all the answers, this method is perhaps the most inexpensive way to start shopping for a dive vacation. Your request for information carries no obligation and you won't be pressured into buying something you really do not want.

Most dive resorts will respond with brochures and information that are very helpful. Such material will provide you with a fairly good overview of the whole dive travel picture and give you a few clues as to what such a vacation is going to cost. One word of caution, however: Don't make a hasty choice based purely on price alone. The cheapest dive trip may not necessarily be the best. Count the number of dives you are getting and compare it to the price you are paying.

Research your choice: Reviewing the brochures is only a beginning. It will help you narrow down your selection to perhaps three or four destinations. Now it is time to really go to work and research those spots which interest you the most.

Try to collect everything which has been written about those locations which appear most promising to you. Again, SKIN DIVER is a perfect place to start, since each issue contains a wealth of information about dive travel and resort destinations all over the world. In a period of one year SKIN DIVER publishes approximately 220 pages of editorial infor-

mation about island destinations, resort hotels, resort operators, tour operators and airline services to those destinations. Every month, there are in-depth articles on specific resorts and the underwater attractions they offer. Several times a year SKIN DIVER also publishes comprehensive special supplements on major dive resort areas such as: the Bahamas, Cayman Islands or the Virgin Islands. In addition to the regular articles and special sections, SKIN DIVER publishes monthly news and information about newly established resorts, dive facility expansions, new boats, and personnel changes.

Don't just stop with SKIN DIVER. Check out other publications for different points of view. There are travel newsletters, travel magazines and newspaper travel sections which also publish articles on many resort destinations which have dive facilities. While these articles and reports may not be purely dive oriented, they can prove helpful.

Seek out references: One of the best ways to dig out the true facts about a particular dive resort is to find another diver who has recently been there. He or she can give you a first hand report on what the resort is like as well as helpful hints on what to bring, what to ask for and how to get the most out of your visit.

One word of caution in obtaining personal references of this kind, be aware that such information is probably a little biased depending on the underwater interests and personal requirements of the diver to whom you are talking.

Verify your facts: Because the travel business is so changeable and there is high turnover in hotel staffing, it is extremely important for you to verify the facts about the resort you intend to visit. Is that divemaster with the terrific reputation still working there? Is the boat still running well? Is the equipment in good shape? Is the airline flight schedule still the same?

One of the best ways to verify such information is by contacting a travel agent who specializes in dive travel and dive tours. These specialists can be easily found in the pages of SKIN DIVER — they

(Continued on Page 43)

Was your last dive vacation a disappointment? Did you return home feeling you had paid far too much for too little diving? Well, you're not alone.

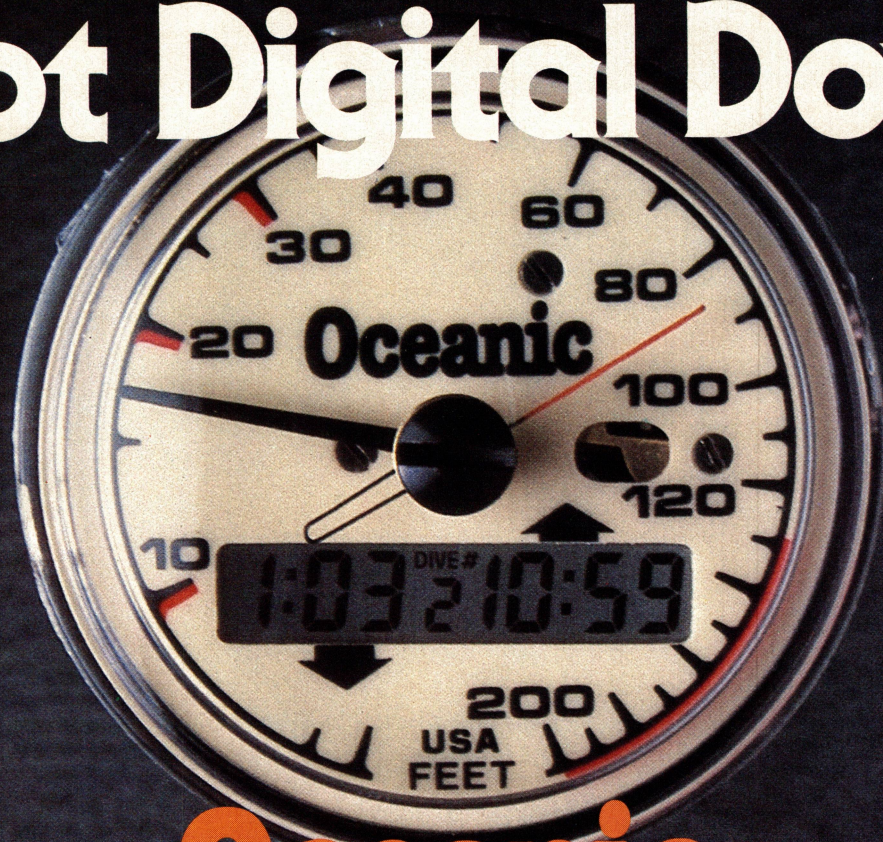
From time to time we receive pitifully sad letters from readers who have endured outrageous situations during their overseas vacations. For example, there was the diver who traveled almost two full days to an obscure island resort in the Caribbean only to find the hotel's air compressor had been broken for more than two months and no diving was available. The new hotel manager was not interested in offering dive services, but had never bothered to correct the information contained in the hotel brochure. Then there was the case of the couple who were veteran divers — they went off to a tropical resort in the Pacific which claimed to offer a scuba diving program. The "program" consisted of a handful of scuba tanks and a mini-compressor which could only pump one tank per hour. This would not have been so bad if there had not been 40 other scuba diving hotel guests. The couple was looking forward to making three dives per day but ended up making a total of three dives during an entire week.

The best story is that of the know-nothing travel agent who blissfully booked a couple of divers on a glass bottom boat ride claiming it was an underwater tour!

If you are interested in planning your next dive vacation wisely, consider the following suggestions for avoiding those devastating pitfalls in the complex jungle of the travel industry. Here are a few helpful hints on getting off to a good start:

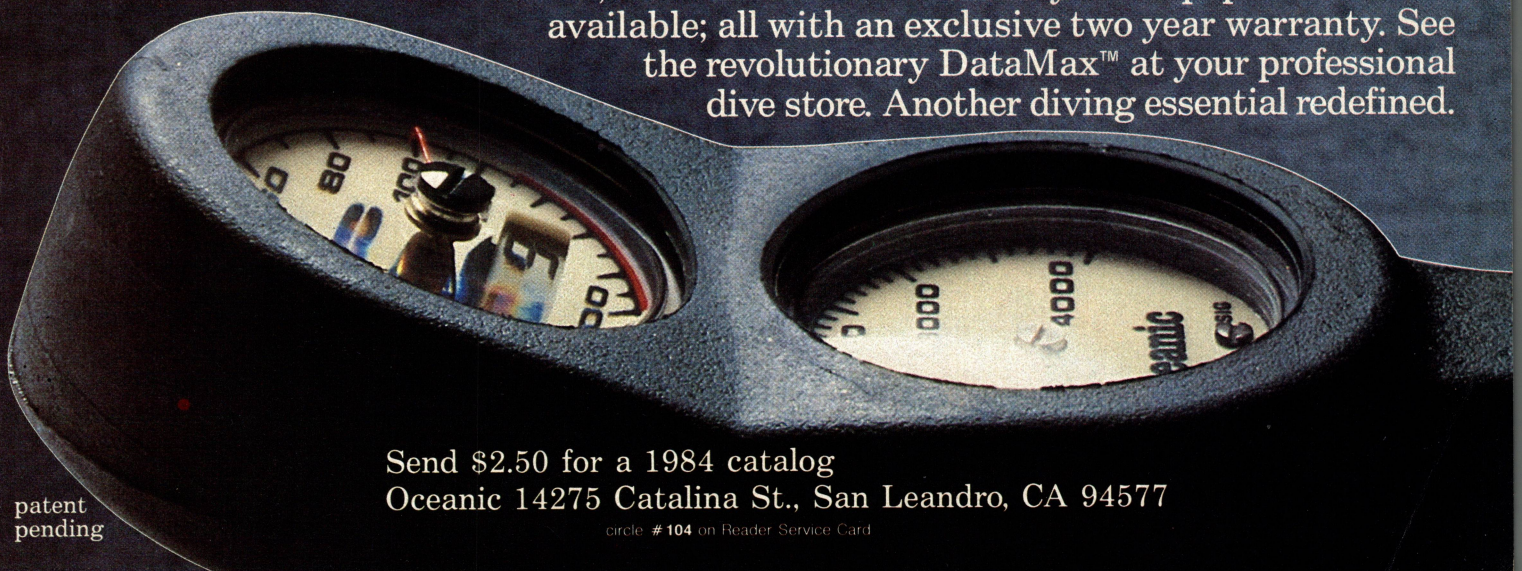
Check the ads: How does one tackle the mind-boggling job of selecting an ap-

DataMax™ We've Got Digital Down



Oceanic™

introduces five bold information displays with **all** the data necessary for U.S. Navy no-decompression calculations. The digital displays (high contrast LCDs) track the diver's **bottom time**, **surface intervals**, and **number of dives** powered by a tiny lithium cell rated for 6600 hours. The **present depth** and **max-depth** indicators are analog functions accurate to $\pm 2\%$ at 100'. Without switches or buttons, all displays automatically activate when you submerge and are retained upon ascent. The DataMax™ is available in a wrist unit, console mounted, and as a module to fit many of the popular consoles available; all with an exclusive two year warranty. See the revolutionary DataMax™ at your professional dive store. Another diving essential redefined.

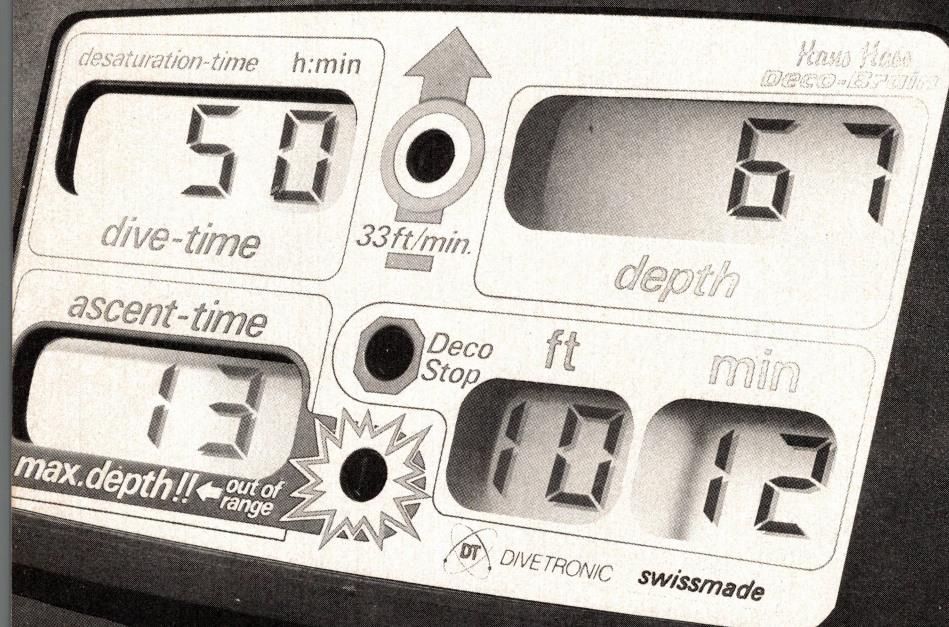


Send \$2.50 for a 1984 catalog
Oceanic 14275 Catalina St., San Leandro, CA 94577

patent
pending

circle #104 on Reader Service Card

DECO-BRAIN™



DON'T ENTRUST YOUR DIVING TO ANYTHING LESS

The Deco-Brain diving computer is built with Swiss quality and craftsmanship to increase safety and lengthen diving times.

Deco-Brain's advanced microprocessing technology consolidates the functions of several conventional diving instruments into one unit.

Deco-Brain shows:

- Actual depth and maximum depth
- Lapsed DIVETIME
- Decompression depth and time
- Surface interval, desaturation time
- Out of range warning
- NO-STOP-TIME warning, decompression-countdown
- Log-book entries—max. depth, total divetime
- Total ascent-time and ascent rate warning

High-intensity liquid crystal display ensures visibility on night dives or in murky water. The computer's automatic calculations are based on conservative Swiss deep-diving and high-altitude tables. Deco-Brain is programmed to permit use as a decompression computer without any adjustment for diving at sea-level or in high-altitude lakes. It is ideal for strenuous conditions such as strong currents and cold water.

For more information, write to:

Divetronics Inc.
320 Michigan Avenue
Chicago, Illinois 60601
312-346-7488

To order Deco-Brain computers, call toll free:
1-800-621-9070

DiveTronics Inc.

skindiver

STAFF

PAUL TZIMOULIS / V.P./Group Publisher, Photography/Marine Division
BILL GLEASON / Editor-Publisher
CONNIE JOHNSON / Managing Editor
ART SMITH / Art Director
BONNIE J. CARDONE / Executive Editor
LESLIE BARROWS / Asst. Art Director
JIM WALKER / Associate Editor
JIM R. WARNER / Ad Service Coordinator
JALILA EL-SHAHAYK / Sr. Editorial Asst.
RAMONA AGUIRRE / Publisher's Secretary

CONTRIBUTING EDITORS

BILL BARADA / Environmental Editor
HILLARY HAUSER / Special Features Editor
JIM & CATHY CHURCH / Photography Editors
JACK MCKENNEY / Adventure Editor
E.R. CROSS / Technifacts Editor
GERI MURPHY / Special Assignments Editor
ELLSWORTH BOYD / East Coast Editor
GEORGE COZENS / Technical Editor
ALFRED A. BOVE, M.D. / Medical Consultant

ADVERTISING SALES

WILLIAM MADONNA / Los Angeles
TONY ANSELMO / Los Angeles
MARIO VALENZUELA / Los Angeles
JOHN RUOFF / Atlanta
LINDA TAYLOR / Atlanta
EDWARD MONK / New York
DONNA SMITH / New York
SANDRA GONZALEZ / Chicago

PETERSEN PUBLISHING COMPANY

R.E. PETERSEN / Chairman of the Board
F.R. WAINGROW / President
ROBERT E. BROWN / Sr. Vice President Publisher
FLOYD SEMBLER / V.P. National Ad Director
ROBERT MacLEOD / V.P. Publisher
THOMAS J. SIATOS / V.P. Group Publisher
PHILIP E. TRIMBACH / V.P. Financial Administration
JAMES J. KRENEK / V.P. Manufacturing
NIGEL P. HEATON / V.P. Circ. Mkt. Development
LEO D. LAREW / Treasurer/Assistant Secretary
DICK WATSON / Corporate Controller
DAVID E. LEWIS / Controller
RAYMOND PRICE / Director, Financial Planning & Analysis
LOUIS ABBOTT / Director, Production
MARIA COX / Director, Data Processing
BOB D'OLIVIO / Director, Photography
STAN SCHULER / Director, Circulation
AL ISAACS / Director, Corporate Art
CAROL JOHNSON / Director, Advertising Administration
DON McGLATHERY / Director, Advertising Research
VERN BALL / Director Fulfillment Services
HENSON LACON / Director, Subscription Sales
LEE KELLEY / Publisher, Specialty Publications

ADVERTISING OFFICES

LOS ANGELES

Ralph Panico, Western Ad Director
8300 Santa Monica Blvd.
Los Angeles, CA 90069
Phone (213) 656-5425

NEW YORK

James J. Rainsford
Eastern Advertising Director
437 Madison Avenue
28th Floor
New York, NY 10022
Phone (212) 935-9150

DETROIT

Richard Barron, Branch Manager
333 W. Fort St. Building, Suite 1800
Detroit, MI 48226
Phone (313) 964-6680

CHICAGO

William Walker, Midwestern Regional Ad Director
John Hancock Center
875 N. Michigan Ave. Suite 3131
Chicago, IL 60611
Phone (312) 222-1920

CLEVELAND

Dewey F. Patterson, Branch Mgr.
Three Commerce Park Square, Suite 605
23200 Chagrin Blvd.
Cleveland, OH 44122
Phone (216) 464-1522

ATLANTA

Richard Holcomb, Branch Mgr.
Four Piedmont Center, Suite 601
Atlanta, GA 30305
Phone (404) 231-4004

DALLAS

Jeff Young, Branch Mgr.
800 W. Airport Fwy, Suite 228
Irving, TX 75062
Phone (214) 579-0454

PETERSEN ACTION GROUP

Ralph Panico/Western Advertising Director, Los Angeles
James J. Rainsford/Eastern Advertising Director, New York
Richard Barron/Detroit Branch Manager
William Walker/Midwest Regional Advertising Director
Dewey F. Patterson/Cleveland Branch Manager
Richard Holcomb/Atlanta Branch Manager
Jeff Young/Branch Manager, Dallas

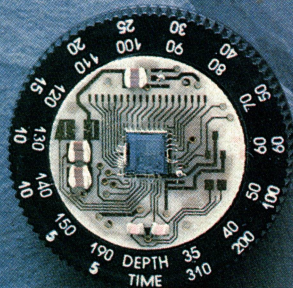
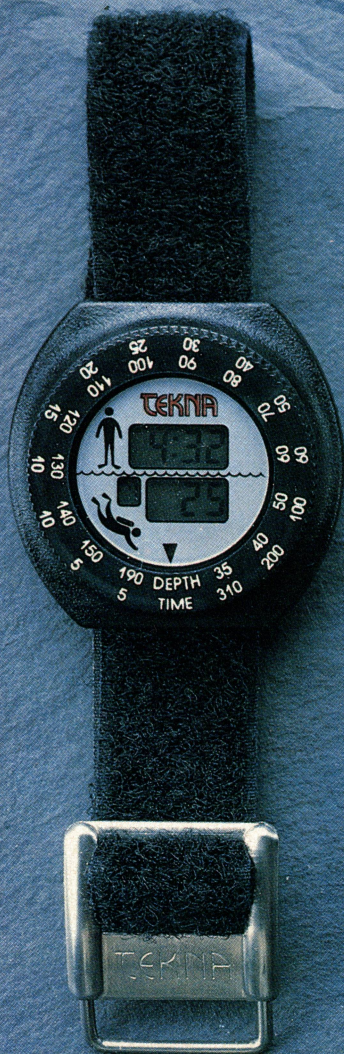
THE 1 OZ WRIST COMPUTER WITH A DIVER'S MEMORY

Tekna's Digital Dive Timer™ is a Lithium-powered CMOS hybrid microcomputer programmed to continuously track and display your bottom time, surface interval and number of dives.

Without switches or buttons, it turns itself on automatically when you enter the water, and continues to store and display single and multiple dives throughout the day and even tells you when it's safe to take a plane flight 12 hours after your last dive.

Its ratcheting bezel displays the U.S. Navy No Decompression limits for convenient dive planning, and is designed to be used as a wrist instrument or module that snaps into our multi-gauge combos.

The Tekna Digital Dive Timer — designed to remember when you don't!



TEKNA®

1075 Old County Rd.
Belmont, CA 94002

circle # 106 on Reader Service Card

Wreck Facts

BY ELLSWORTH BOYD

Larry Ranieri, State College, PA, is researching the treasure ship, *Debraak*, sunk off the Delaware coast in 1798. So much has been written about the *Debraak*, Larry, that you'll have to sift fact from fiction. An endless procession of divers and entrepreneurs have sought the English treasure ship for over 150 years, but none has found the pot of gold at the end of the rainbow: \$40 million to be exact!

Built in Holland in 1787, the 125 foot teakwood sloop with a 30 foot beam had plenty of room for the gold and silver bars, jewels and coins she captured from Spanish treasure ships in 1797. Captain James Drew and a crew of 38 set sail from Jamaica with a treasure that overburdened the vessel. The captain ran into a violent storm and tried to steer his ship into a nearby bay, now called Delaware Bay near Cape James, which is now Cape Henlopen, Delaware. The hulking sloop, unbalanced and overloaded, rolled over in the high seas. The captain went down with his ship, but seamen scrambled into a small boat and put ashore at Lewestown, now Lewes, Delaware. Some researchers think the ship went down off the Delaware coast and is buried under tons of sand, while others speculate that she made it into the bay. Divers have searched everywhere for the *Debraak*, but they've had a difficult time in Delaware Bay because there are over 125 ships wrecked there. Mementos from the ship, including the captain's clothing chest that washed ashore, are on display at the Zwaanendael Museum in Lewes.

Chuck Wine says New Jersey divers are discovering their own treasures on wrecks that have been dived thousands of times. The chronograph from the *Chaparra*, still in its original wooden box, was

found lying in the sand next to the wreck. A porthole in perfect condition, its glass and brass storm cover intact, was found in the sand next to the *San Saba*. Other items picked up from the same ship include jars, bottles and silverware. A mast light, brass telephone box, sextant and other navigational aids were salvaged from the *Great Isaac*. Storms and shifting sands account for these unforeseen discoveries of a bygone era.

Greg Fortner, Norfolk, VA, asks about the Spanish ship, *Guadaloupe*, sunk in Ocracoke Inlet, North Carolina in 1750. Greg, these are the only wrecks I can find listed in that area: *Pioneer*, *Richard Spofford*, *Ariosto*, *George Wells*, *The Henry*, *Aurora*, *Tiger* and *Lydia Willis*. I found a Spanish frigate, *Guadalupe*, wrecked off Cuba in 1799 and a British warship, HMS *Guadeloupe*, scuttled in the Chesapeake Bay in 1781. Perhaps our readers can offer you some clues. Greg's address is: 2920 Peterson St., Norfolk, VA 23509.

Curtis Watters, Garland, TX, says he can't locate anything on the *City of New York*, sunk off North Carolina in March 1942. There is a fascinating story connected to this war loss, Curtis, proving that truth is indeed stranger than fiction. Here is a riddle about the ship. See if you can solve it. When this 5,000 ton American passenger ship, en route from Capetown to New York, was torpedoed, 33 people died. There were 105 survivors who abandoned ship in four lifeboats, but when the U.S.S. *Roper* came to their rescue, 106 people boarded the American destroyer. Where did the extra passenger come from? To the best of my knowledge, this is the only case ever recorded where a baby was born at sea in a lifeboat! Adding more drama to the story, the ship's doctor from the *City of New York* happened to be in the same lifeboat

as the expectant mother. In honor of the U.S.S. *Roper's* rescue efforts, the child was named Jesse Roper Noharovic.

There is another *City of New York* in the Graveyard of the Atlantic, this one listed as a federal transport, sunk January 15, 1862 in Hatteras Inlet. She was part of a federal fleet that set out to capture eastern North Carolina. The fleet consisted of ferryboats, sidewheelers, and river craft, some armed with a gun or two, but all classified as gunboats. Others were called supply boats, transporting guns, horses and supplies. Although unsophisticated, the strange northern fleet was superior to anything formed by the southern states at that time. The improvised federal battle flotilla reached Hatteras Inlet July 12, 1862, but faced strong winds and rough seas pounding the coast. The boats were forced to anchor offshore waiting for the tempest to calm before attempting to cross Hatteras Bar. But while they were anchored, many vessels grounded and at least one, the steamer *New York*, was lost.

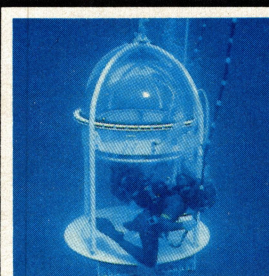
Dan Berg, E. Rockaway, NY, asks about the *Black Warrior*. She is listed in *A Guide to Sunken Ships in American Waters* as: 1,556 tons, built in 1852, sunk February 20, 1858 in 30 feet off Rockaway Beach, Long Island. The U.S. Coast and Geodetic Survey, covering N.E. Atlantic waters, lists charts number 1108 and 1215 covering this area. All I could locate, Dan, on your other questions about the *Francisco* is that it's a bark, lost in the 1800s, off Chatham, MA, cause unknown. For photos of the vessels, you might try the National Archives, Washington, DC.

It is a small world for Randy Greeninger, Astoria, OR. Randy, working for the Columbia Diving and Salvage Company in Astoria, is researching vessels wrecked along the California, Oregon and Washington coasts. You have one of the best resource people right in your own backyard, Randy. He is Don Marshall, author of *California Shipwrecks—Footsteps in the Sea*. Contact Don at: 788 Franklin Ave., Astoria, OR 97103. Don has a new book called *Oregon Shipwrecks* that you may want to purchase. He can advise you on wrecks in the Washington area as well.

Steve Singer, Pompano Beach, FL, is tracing the history of wrecks in and around Broward County, FL. You asked about the *Cumberland/Copenhagen* controversy, Steve and which vessel really is wrecked offshore where the old Jade House Restaurant formerly stood. There is a brand spanking new book out that settles this argument, Steve, and offers a wealth of information on the wrecks you are researching. The book is: *Broward Legacy—A Journal of South Florida History* and features a special section, Shipwrecks of Broward County by James Dean. Order the book from: Bill Ray-

(Continued on Page 39)

Want to work in the diving industry? Come to the world's best commercial diving school...



Photos by LARRY CUSHMAN

Come to Houston!



About a third of the world's entry-level professional divers are trained at the Ocean Corporation in Houston. We're the biggest and the best...and the commercial diving companies in our area know it. Last year more than 50 different diving companies hired our people. More divers are hired in Houston than any place in the world. Houston is the oil, offshore construction and commercial diving capital of the world.

If you are interested in becoming a professional diver, remember these facts about the Ocean Corporation.

We teach everything you need to know to immediately go to work.

We run complete night courses as well as our regular day classes.

We have the largest full-time training staff of any diving school... anywhere.

Most of our instructors are active inshore and offshore commercial divers.

We pioneered bell diver training, in-house welding training, ASNT-level inspection diver training and Diver Medic certification.

We have our own diving division which performs specialized industrial diving operations, such as underwater NDT inspection and nuclear powerplant repair work.

We have a fine climate and good living conditions. Nearby apartment sharing and part-time jobs are readily available.

We'll help you get your first diving job.

Remember, all commercial diving schools are not alike. Check them out. Visit the school if you can. Look for real commercial diving professionalism and reputation, adequate facilities and equipment, experienced instructor staff, decent housing and living conditions, and, probably most important to you, ask them how they plan to help you get your first job in the commercial diving industry.

If you want to be a professional diver, contact our Admissions Department. Use the Reader Service Card or call us toll free - (800) 321-0298. You'll be glad you did.

The Ocean Corporation

5709 Glenmont, Houston, Texas 77081 (713) 661-0033

Tabata - 4.2

Full View

The difference is clear. Tabata full view lens (left) eliminates unsightly circles around your eyes.

SEE WELL. LOOK GOOD.

Now there is a Tabata Splendive mask that improves your vision and your appearance at the same time.

Tabata corrective masks eliminate the unsightly circles around your eyes, thanks to the beauty of precision, fully ground lenses.

And you'll feel as good as you look, because Tabata has developed a double, feather-edged silicone skirt for comfort and formability. Low volume design and quick adjust strap buckles are just a few of our many performance and ergonomic features.

Your Tabata dive shop stocks Splendive corrective lenses in diopter from -2.0 through -7.0 in -0.5 increments. All provide optimum peripheral vision and are available installed or individually.



Tabata Splendive 2900 and 3000/Mini Series masks are available in a choice of black or crystal silicone skirts in Aqua Blue, Smoke and Wine Red frames. Protective case included.

Get the full view with Tabata.

Tabata

Tabata USA Inc.
20818 Higgins Court, Torrance, CA 90501
Telephone: (213) 320-6483
TLX: 349-6266 TABATAUSA TRNC

Scuba Quiz

Category: Breathing Patterns

By Dennis Graver

Above water, breathing is automatic, not requiring conscious effort. This isn't the case in the aquatic environment, however, where breathing patterns vary and, at times, need to be controlled. Test your knowledge of the ins and outs of respiration by answering the questions. Select the most correct answer for each. The answers are on the next page.

1. The most effective breathing pattern for a diver is:

- ☐ A. Slow, deep and continuous
- ☐ B. Slow, medium depth, slight hesitation between breaths
- ☐ C. Slow, very deep and with a pause of several seconds between breaths
- ☐ D. Rapid, shallow and continuous

2. A breath-hold diver can safely extend time underwater by:

- ☐ A. Hyperventilating just until dizziness is felt
- ☐ B. Establishing a rhythmic cycle of dives and surface intervals
- ☐ C. Swimming slowly while submerged
- ☐ D. All of the above

3. When a scuba diver experiences air starvation underwater; that is, it feels as if the regulator is not delivering a sufficient amount of air when there is plenty available, the problem is most likely:

- ☐ A. A regulator badly in need of service
- ☐ B. Overexertion by the diver
- ☐ C. A malfunction of the regulator
- ☐ D. Extremely poor diver fitness

4. To prevent the inhalation of water when clearing a snorkel or a regulator, the first breath taken should be:

- ☐ A. Inhaled cautiously
- ☐ B. Done with the tip of the tongue on the roof of the mouth
- ☐ C. Shallower than normal
- ☐ D. All of the above

5. By varying the average lung volume, buoyancy can be affected as much as:

- ☐ A. 1-2 pounds
- ☐ B. 3-4 pounds
- ☐ C. 4-5 pounds
- ☐ D. 6-8 pounds

6. During an emergency swimming ascent, the breathing pattern least likely to result in an air expansion injury is a:

- ☐ A. Continuous exhalation with most of the air expelled at the beginning of the ascent
- ☐ B. Continuous exhalation with most of the air expelled near the surface
- ☐ C. Normal breathing pattern with attempted inhalations
- ☐ D. Complete exhalation at the beginning of the ascent with the breath held for the remainder

7. Blackout while scuba diving is most likely to result from which of the following breathing patterns:

- ☐ A. Rapid and deep
- ☐ B. Rapid and shallow
- ☐ C. Holding each breath for five seconds
- ☐ D. All of the above

8. The single greatest cause of lung expansion injuries while scuba diving is:

- ☐ A. Coming up too fast
- ☐ B. Lung defects
- ☐ C. Breath-holding
- ☐ D. Not understood

9. Rapid, deep breathing prior to a breath-hold dive:

- ☐ A. Is dangerous and must be completely avoided
- ☐ B. Can safely prolong breath-hold time if limited to 3-4 breaths
- ☐ C. Can be safely done to a greater extent as one becomes experienced
- ☐ D. Is a sign of a poorly conditioned diver

10. During decompression stops (safety or emergency), the breathing pattern should be:

- ☐ A. Deep with the emphasis on inhalation
- ☐ B. Deep with the emphasis on exhalation
- ☐ C. Normal and continuous
- ☐ D. Faster and shallower than normal

Scuba Quiz

Answers: Breathing Patterns

1. A. Slow, deep and continuous.

Due to the increased density of air under pressure, slow breathing allows a smoother flow of the air through passages. Moving dense air rapidly results in turbulence and increased resistance to flow. Deep breathing is preferred because of increased non-respiratory air space added by equipment and because greater breathing efficiency is possible with larger tidal volumes of air.

2. B. Establishing a rhythmic cycle of dives and surface intervals.

The body adapts well to rhythmic cycles. By establishing a pattern of breath-hold time and recovery time, divers can comfortably and safely spend more time underwater than is possible with a pattern of random times of dives and resting periods. An important key point to establishing a rhythm is *not* to extend each dive to the maximum breath-hold limit. Swimming, even slowly, uses oxygen because of the large thigh muscles involved. Bottom crawling is better.

3. B. Overexertion by the diver. It is my conviction that overexertion is one of the most important topics in diving. It is the initial factor in many accidents. While underwater, a scuba diver should never experience shortness of breath. At the first sensation of this, a diver should cease all activity, breathe deeply and recover before proceeding.

4. D. All of the above. Controlling the airway is important for the prevention of choking. We can gasp above water without difficulty, but gasping while in water is ill-advised. With practice, one can actually breathe air *through* water by inhaling carefully and forming a splashboard with the tongue. Try this with a snorkel half-filled with water.

5. C. 4-5 pounds. Divers tend to think of buoyancy being controlled with weights and buoyancy compensators, but should note that slight adjustments are possible by varying the breathing pattern. I can breathe continuously yet keep my lung volume low or can maintain a larger than average lung volume. This difference allows me to become lighter or heavier for maneuverability or stability without varying the amount of air in my BC.

6. C. A normal breathing pattern with attempted inhalations. Believe it or not, a person can embolize even when exhaling continuously. This is owing to air trapped in the lungs from the collapsing of small airways. This results from a combination of factors, especially the continuous flow of air in one direction. The closed airway can be reopened with an attempted inhalation. The other breathing patterns described, especially the old "blow-and-go" technique, are not recommended; but continuous exhalation is certainly better than breath-holding during ascent.

7. B or D. I suppose that extremes of any of these patterns could result in loss of consciousness. None of the patterns are desirable, but the most hazardous of the three is rapid, shallow breathing. This usually stems from anxiety, can lead to a panic cycle and may end with unconsciousness. This pattern must be recognized and avoided.

8. C. Breath-holding. The common denominator for all lung-expansion injuries is holding the breath while ascending. This doesn't apply to just swimming ascents. A friend of mine ruptured his lung while straining to cock a speargun. The large breath he took caused him to float upward while straining to cock the gun. Always keep breathing when breathing compressed air underwater.

9. D. A and B, but not C, are correct. Hyperventilation reduces the stimulus to breathe by lowering blood CO₂ levels. Excessive reduction of the CO₂ can prevent a breathing stimulus from occurring until after a person loses consciousness from lack of oxygen. Limited hyperventilation *is* safe and useful. It is usually the most experienced breath-hold divers who black-out because they keep trying to increase their limits and exceed the safe limits for hyperventilation.

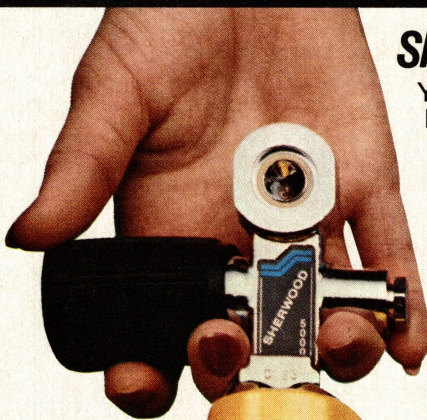
10. C. Normal and continuous. Respiration is the only means to eliminate excess nitrogen during a dive. Safety decompression stops are recommended as a precaution to prevent the bends. The decompression stop depth should be maintained at chest level, exercise kept to a minimum and respiration should be at a normal rate. Beware of deep breathing when swells pass overhead because a passing trough reduces water depth and has the same effect as a rapid ascent.

Proper breathing patterns in and under the water allow us to prevent injury, feel comfortable and control buoyancy. Improper breathing usually stems from inexperience, ignorance or attempts to prolong the length of time spent beneath the surface. Education, experience and the wise application of knowledge are all required to establish safe breathing patterns. Reading books on diving medicine, taking continuing education courses in diving, attending conferences and seminars, and developing a safe attitude are all recommended. I hope this quiz on respiration didn't leave you breathless, for all divers should be familiar with the concepts presented.

TAKE A CLOSER LOOK AT KIDDE, TOO!



The Kidde Nutrabuoy[®] Cylinder and the Sherwood Slant-Back K Valve... An Unbeatable Combination.



Slant-Back K Valve

You'll love the convenience of this Sherwood scuba tank valve. The extra-long slant-back handwheel gives you more hand room and is ribbed for trouble-free turning, even when you have a glove on. You'll also find cylinders easier to carry because the handwheel and long safety assembly boss are positioned for a better grip.

Nutrabuoy Cylinder

The improved Nutrabuoy Cylinder from Kidde features "neutral buoyancy" when approximately half full. Heavier in weight, the Nutrabuoy Cylinder also permits the diver to carry less weight. To the experienced diver, both of these features make for easier diving.

The heavier walls give it more strength. The cylinder is made of a corrosion-resistant aluminum alloy so there's never any problem with rust. And the handsome, baked-on, chip-proof epoxy coating is the toughest finish you can get anywhere.

On land, the Nutrabuoy's higher neck allows you more finger room for carrying. The Kidde cylinder has a service pressure of 3000 psi, an 80-cubic-foot capacity and is individually pressure-tested to assure complete safety in accordance with DOT/CTC requirements.

Take a closer look at Sherwood. Pick up your Kidde Nutrabuoy Cylinder and Sherwood Slant-Back K Valve at any professional dive store that carries Sherwood scuba gear.

**SHERWOOD
SCUBA**

circle # 109 on Reader Service Card

Sherwood Selpac Corp. A Hill Acme Company.
P.O. Box 790, Lockport, NY 14094-9990 U.S.A.

Nutrabuoy[®] is a registered trademark of Kidde.

SS-316

BEE ROCK

Perfect, When The Time Is Right

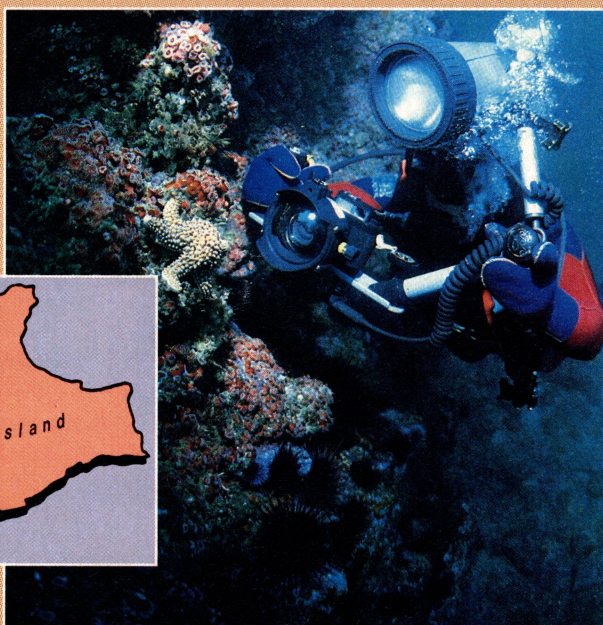
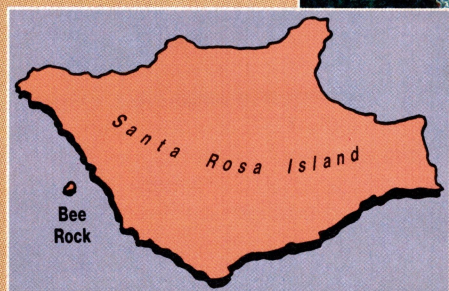
TEXT AND PHOTOGRAPHY
BY JIM COOLURIS

Imagine massive pinnacles in only 60 feet of water, completely covered with anemones, corals, nudibranchs and countless other forms of marine life so lush an underwater photographer could spend hours in a small area photographing the different animals. This describes the Bee Rock area of Santa Rosa Island, about 30 miles from Santa Barbara or Ventura Harbors on the California mainland. Not always accessible owing to large swells or high winds, the best time to dive here seems to be from October through January—barring any major storms.

My favorite area is about 700 yards west of Bee Rock. Here is a huge underwater pinnacle, beginning just a few feet under the surface and plunging to 60-75 feet on the ocean floor. There is a sheer, 50 foot high cliff on the shallower side. Glowing hues of red and magenta *Corynactis* anemones create a velvet carpet, where brightly colored nudibranchs forage for hydroids among the tube worms and solitary corals. Brilliantly tinted starfish and snails dwell on this living carpet. On the upper plateau is a forest of palm kelp covering large crevices where sea urchins, green anemones and giant starfish dwell. Shy rockfish hover under the ledges seemingly hidden from predators above, although these same rockfish readily pose for the patient U/W photographer.

Bee Rock is one of my favorite destinations in California. It's not always divable, but when it is, a memorable experience awaits the underwater photographer. x

Bee Rock, near Santa Rosa Island, provides the underwater photographer with a profusion of close-up opportunities. Far right: The gaudy nudibranch, *Flabellinopsis iodinea*, makes an excellent close-up subject.



R-131

R-131. A completely new direction in Wet Suits.

It's the all new neoprene from Rubatex, the number one name in Wet Suit materials.

R-131 has outdone them all. Incredibly soft yet durable, with very low modulus for wearer comfort.

Rubatex R-131 is extraordinary.
IT'S AMERICAN!

Look for the Hang Tag.
It will be on the suit
that's distinctively
better.

More information?
Call: 1-800-RUBATEX



RUBATEX



EWA

MARINE MASTER

Instant and Inexpensive U/W Camera
Housing Pressurized to 100 ft.

TEXT AND PHOTOGRAPHY BY STEPHEN FRINK



The Ewa-Marine flexible camera housing is not a new concept. It was first reviewed in SKIN DIVER Magazine in July 1979 and many of the observations made then are still relevant to the newest evolution, the Master Series. For example, the housing is still constructed of a strong, transparent, flexible, double laminated PVC with two permanently sealed optical glass ports. The port on the front matches with the front of the camera lens while the rear port is designed to fit over the viewfinder so the photographer both views and shoots through glass. Controls are accessible through a soft, built-in glove bonded to the wall of the housing which permits fingertip control of focus, shutter speed, film advance and aperture.

The camera is placed inside the housing through a large opening at the top which is secured against water leakage by a long, stainless steel double railing. The bottom rail has a convex configuration with three bolts. The housing has reinforced holes at the top spaced appropriately to slip over these bolts and the top rail is a matching concave shape with attached nuts to hold the railings together. The vinyl against vinyl forms a watertight seal.

There are some significant improvements evident in the Master Series housing as compared with the earlier models. Probably the most important feature is extended depth range. The new models are pressure tested to 100 feet and are designed for comfortable use in the 60 foot range. There is a quick-focus ring to facilitate control as the housing is compressed by water pressure and an adapt-

er ring to hold the lens securely in the center of the front port. In the older Ewa housings, the camera was held in place by rather cumbersome plastic straps; Velcro® fasteners in the new models are a definite improvement.

To test the Ewa Master Series housing in the open ocean, we used a Nikon FE with an MD-12 motor drive. I have used Ewa housings in the past with cameras lacking a motor drive or power winder and while it works, it is awkward because the flexible housing compresses to fill the space where the thumb fits inside the wind lever. The power winder or motor drive makes using this housing much easier. The lenses tested included the Nikkor 20, 24 and 55 mm micro.

Because the non-interchangeable port is flat there is some refraction evident with the 20 mm, but since the port will be compressed directly against the lens underwater like a filter, the aberrations are minimized. The angle of view will certainly be less than the same lens topside, but for photos of people underwater and reef panoramas, the 20 mm performed adequately. The 24 mm displayed better optical performance and was well-suited to photographs of schooling fish. Predictably, the 55 mm micro lens was the best for fish portraits.

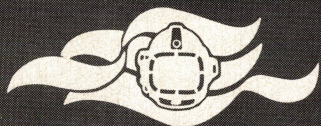
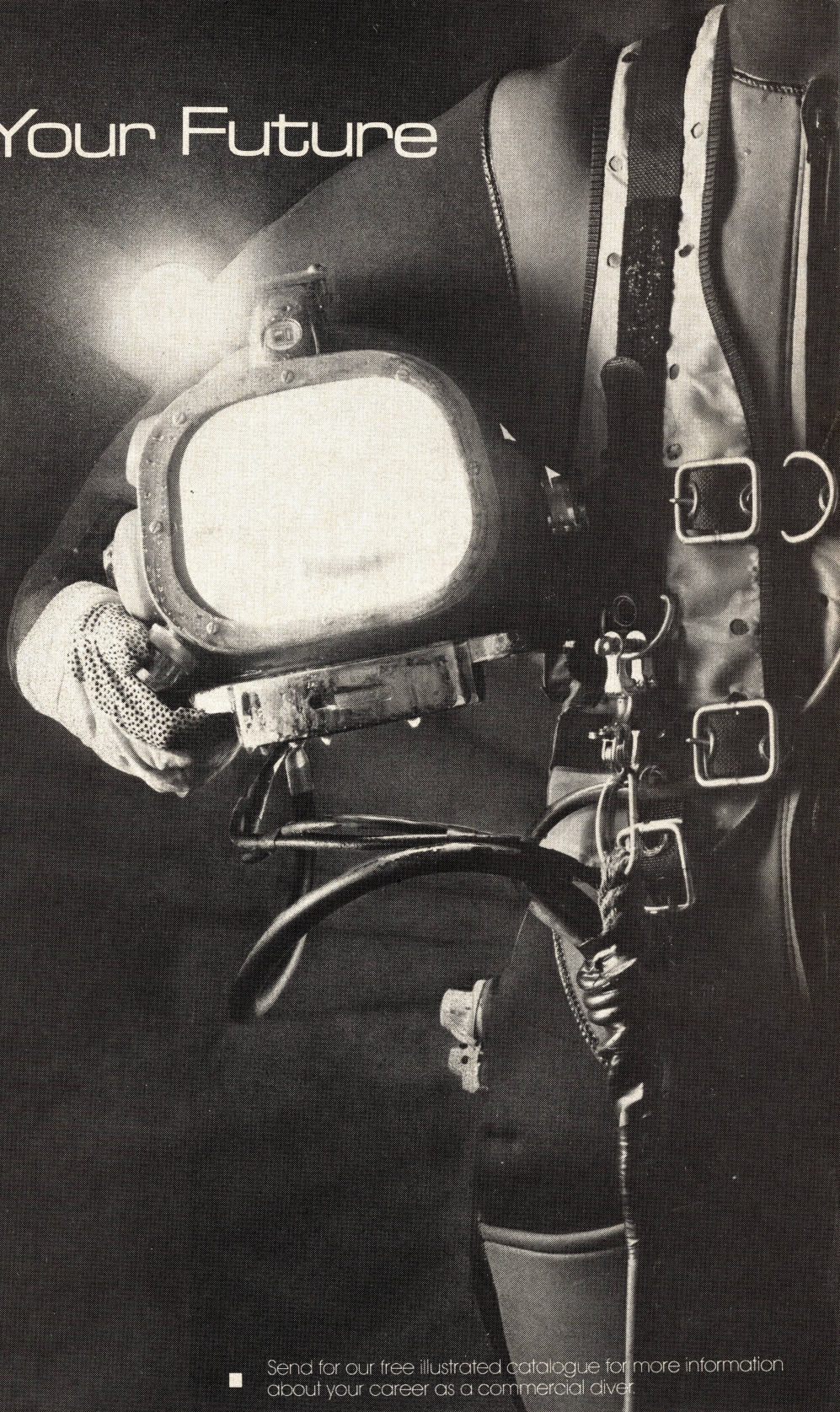
The Master Series housing is designed to accept a topside strobe as well as the camera, so theoretically colors can be achieved at depth. But in practice, the water must be extremely clear or the focusing distance close to avoid the backscatter inevitable with a strobe directly adjacent to the lens. Available light pho-

tographs are those appropriate for an Ewa housed camera.

The first series of tests with the housing was in shallow water, 10 to 15 feet deep. The housing showed no signs of leakage, but it is always a good practice to follow the manufacturer's instructions and watch for telltale bubbles escaping in a stream anywhere in the housing. Should this occur, surface immediately. In shallow water the escaping air will keep water from entering and damaging the camera. In shallow water it is best to force most of the air out of the housing at the surface to reduce excessive buoyancy underwater. However, if greater depths are projected it is best to trap more air inside before sealing the bag. This will keep the vinyl from adhering too closely to the camera for comfortable operation. Whether shallow or deep, it is much easier to insert your hand into the molded glove at the surface than underwater.

The Ewa-Marine housings will fit a wide variety of 35 mm and medium format still cameras, Super 8 and 16 mm movie cameras, and even video units. The ease of operation underwater will not favorably compare with a finely machined rigid housing, but in fairness to the design, such is not the intent. The Ewa housings provide an inexpensive means to protect a camera from the damaging effects of saltwater and spray and are especially useful with automatic cameras in shallow water. The EWA-Marine Master Series housings range in price from \$79.95 to \$99.95. Contact Pioneer and Co., 216 Haddon Avenue, Westmont, New Jersey 08108. 

Explore Your Future In Depth.



COLLEGE OF OCEANEERING

Los Angeles Harbor
272 South Fries Avenue, Wilmington, CA 90744
(213) 834-2501

Send for our free illustrated catalogue for more information
about your career as a commercial diver.

S Name _____
D Address _____
8 _____
4 City _____ State _____ Zip _____
1 Phone _____ Age _____



COLLEGE OF OCEANEERING
Los Angeles Harbor
272 South Fries Avenue, Wilmington, CA 90744
(213) 834-2501

MARINE LIFE

THE LAVENDER LOBSTER

Tropical fish attract a lot of attention because of their variety of body shapes and bright colors. Almost unnoticed, and often overlooked, crustaceans can be as attractive as these fish. I have compiled a book, *Sea Knights in Armor*, which shows these latter creatures in their full beauty.

Obviously, the study of crustaceans and their relationships is complex and only scientists should attempt it. Thus, I chose only one order, the decapods, for my book. Its members (shrimp, crabs and lobsters) live mainly in that part of the reef that is easily accessible to U/W photographers. In order to find them, I would advise divers to become familiar with the habits of these animals.

One chapter of my book tells about the colorful reef lobsters of the genus *Enoplometopus*. These animals have no economical importance, at best they are

wanted by marine aquarists. The species grow no longer than six inches and are striking in their coloration. The first claws can be used as weapons.

The nimble reef lobsters live along the drop-offs around the Hawaiian Islands. The best known species, *Enoplometopus occidentalis*, was discovered last century and many pictures have been taken of this brilliant red crustacean.

With hairy claws stretched forward, the red reef lobster appears in the late afternoon out of small crevices along the reef down to 40 meter depths. I am convinced, after long observation, that *E. occidentalis* has good eyes. It follows every movement of the diver with its claws.

The discovery of a new species of reef lobster occurred one pitch dark night as I glided along a coral reef about 15 meters deep. I was off the Indonesian island of Bali. Suddenly, my light revealed

something violet. On second look I recognized the typical shape of a reef lobster, which froze on a rock. I barely breathed as I adjusted the focus of my camera. The four inch long lobster had violet dots all over its body. After the third flash of my strobe it started moving backward and I quickly put the camera aside. I placed a small hand net behind the lobster. When I touched its claws it rushed into the net.

After much research by crustacean experts, my presumption was confirmed: I had discovered a new reef lobster. Of course I was happy when the scientists named this beauty after me: *Enoplometopus debelius*. 🦞

Note: Sea Knights in Armor is distributed by Quality Marine, 5420 W. 104 Street, Los Angeles, CA 90045. It is available in tropical fish stores for under \$15.

BY HELMUT DEBELIUS



photo/Nieuwenhuizen/IKAN

The violet claws and dots on the body of this reef lobster identify it as *Enoplometopus debelius*, named after the author, who first discovered it off the Indonesian island of Bali. Reef lobsters are not important as a food source, but their bright color makes them attractive to aquarists.



photo/Debelius/IKAN

INTRODUCING CUDA THE TOTAL DIVING SYSTEM THAT REFLECTS ALL YOUR NEEDS, BOTH IN AND OUT OF THE WATER.

It's called the Custom Underwater Diving Apparatus. CUDA for short. And it is, quite simply, the most revolutionary—and most complete—diving system available.

Nothing gears up like CUDA.

The rugged, flexible backpack is customized to your size right at the dive shop. It slips on in seconds, with simple one-belt closure and one-hand waist adjustment. An internal weight compartment, with quick-release mechanism, is designed to use standard dive weights.



Dive with CUDA's unique convertible BC in front (above) or back position (inset photo).



Nothing swims like CUDA.

Snap CUDA's unique convertible buoyancy compensator into frontal position. Or use the back position for totally unimpeded use of your camera or speargun. Either way, you'll enjoy unsurpassed freedom of movement—because CUDA's one-belt pack eliminates the need for restricting straps or bulky BC jackets.

Nothing surfaces like CUDA.

Ride on the surface in style and comfort. With the convertible BC in frontal position, CUDA's unique "armchair" design floats you high and upright in the water.

Nothing packs up like CUDA.

Stow all your gear in CUDA's own CORDURA® nylon dive bag, with its side fin pockets, top dry pocket, and main storage area with four separate gear compartments—plus a mesh interior and end panel for drainage.

Nothing travels like CUDA.

On land, attach the bag to the backpack and carry CUDA "hands-free." For travel, slip the pack over the bag and carry CUDA onto any plane. Or ship it with confidence: the rugged pack and ABS plastic-lined bag will

protect your gear from the roughest baggage handlers.

Nothing compares with CUDA.

In or out of the water, it's the most convenient, comfortable and complete diving system you'll ever own. For more information—including dealer and price lists—just call (512) 734-0798.



P.O. Box 15675, San Antonio, TX 78212

circle #111 on Reader Service Card

Wet suit by Fathom.

DEEP DOWN, YOU KNOW IT'S BETTER IN THE BAHAMAS.

You don't have to travel the world to get a world of diving experience.

Nowhere else on earth can you get more variety in your diving than in The Bahamas. You could spend a lifetime here and never repeat a single experience.

The Abaco Islands have wrecks, caves, blue holes, and underwater parks.

Andros offers the second largest barrier reef in the world. It's where Blue Hole diving began.

The Berry Islands feature great reef and wall diving on the deep shipping lanes that bisect The Bahamas.

Bimini is right on the three-knot Gulf Stream. A haven for drift divers.

Eleuthera has beaches of pink sand. There are lots of wrecks on the aptly-named Devil's backbone, including a Civil War train wreck.

The Exumas are in the middle of the warm southern Bahamas.

Dive "Thunderball Grotto" or the myriad reefs.

Grand Bahama is a total sports resort. Secluded beaches. Famous UNEXSO facility with deep tank and recompression chamber; instruction for novices and experts.

New Providence is one of the best-kept diving secrets in The Bahamas. Setting for many of the James Bond films.

Rum Cay, one of the smallest islands, known for its wall diving and tame groupers.

Long Island will keep you busy with shallow reefs, dramatic walls, and Shark Reef.

If you want to dry off a little, there are ways. A few sets of tennis. Golf on championship courses. International shopping. Gambling. Dancing. Gourmet dining. The Bahamas has it all.

For reservations, call your travel agent, or us at 800-327-0787. In Dade County, 433-3821. For sports information, call 800-32-SPORT.

**Deep down, we know they're the best
in the business.**

South Ocean Beach RESORT NEW PROVIDENCE ISLAND, BAHAMAS

- circle #113 on Reader Service Card
- Our 5000-acre country club resort represents the best all-around vacation for divers and non-divers
 - Dive the wall on the tongue of the ocean
 - Spectacular drop-offs; coral gardens galore!
 - Dive underwater sites from the famous James Bond movies
 - Sailing, wind-surfing, tennis, and golf
 - International shopping, casinos, gourmet dining and exciting nightlife just minutes away.
- Call toll free (800) 327-5118 In Florida (800) 432-1362

Smuggler's Rest Dive Resort NEW PROVIDENCE ISLAND, BAHAMAS

- circle #115 on Reader Service Card
- Discover So. New Providence diving
 - Dive boat docked at your door
 - Seven secluded waterside villas
 - Across the island from historic Nassau
 - Packages including auto available
 - Overnight film processing
- Call toll free (800) 328-8029 ext. 246
Call collect (809) 326-1143

Treasure Cay BEACH HOTEL & VILLAS

- circle #114 on Reader Service Card
- TREASURE DIVERS**
4 Day/3 Night SCUBA PACKAGE
\$187.50 per person, double occupancy
- Includes air-conditioned accommodations, taxes & tips, 2 open-water coral reef scuba trips (including all necessary equipment). Complimentary tennis, greens fees, snorkeling gear, Sunfish sailboats, chaise longues and beach towels. For reservations, call toll free U.S. 800-327-1584, Florida 800-432-8257, Miami 444-8381.

DIVE SHARK REEF!

- circle #117 on Reader Service Card
- Stella Maris Inn, of Long Island, Bahamas; known worldwide for its Shark Reef Dive... only 1 of 25. Complete dive shop, with 120 rental tanks, 4 air compressors, scuba classroom and training pool, plus custom-built dive truck accommodating 25. See our regular ad for details.



Get Lost.

- circle #115 on Reader Service Card
- No automobiles. Terrific scuba. No television. Breathtaking sunsets. No nightclubs. Luxury villas and hotel accommodations. No telephones. Secluded beaches. Delicious food and excellent service. Great fishing, diving, snorkeling, tennis, sailing. Deep-water marina. Paved runway. No problems. No hassles. The relaxed little island in the Bahamas. Just 45 minutes away.
- WALKER'S Cay**
HOTEL AND MARINA
ABACO, BAHAMAS
- For reservations and information call:
USA Toll Free 800-327-3714
Fla. Toll Free 800-432-2092
or 305-522-1469
- Stateside office: 700 S.W. 34th St. Ft. Lauderdale, FL 33315

NEW SUMMER DIVE PACKAGE

- circle #118 on Reader Service Card
- 8 days/7 nights Atlantik Beach Hotel: on a gorgeous beach, air conditioning, colour TV
 - 10 dives with UNEXSO
 - Daily continental breakfast
 - All taxes and gratuities included
 - \$333 per person double occupancy;
\$444 single occupancy
- Call (809) 373-1244
Write: P.O. Box F-2433,
Freeport, G.B., Bahamas

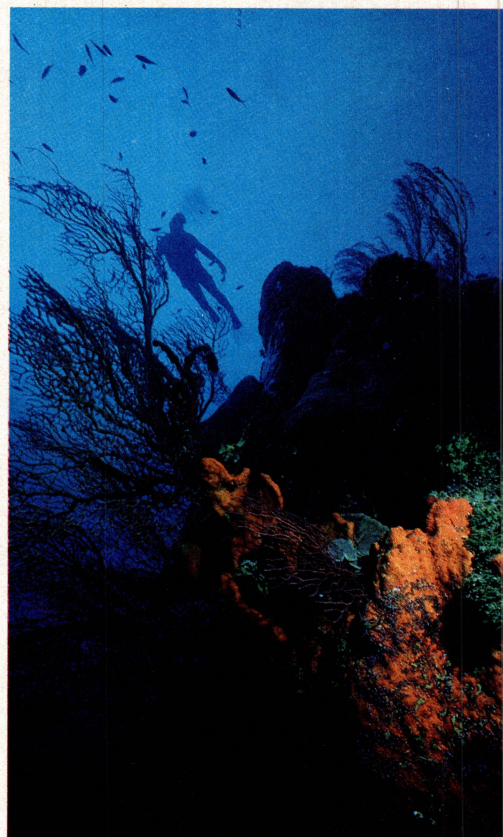




Grand prize winner: Courtney Platt (cuttlefish and its reflection at the surface).



Fourth place winner: Pat Graham (a macro shot of Christmas tree worms).



Second place: Linda Harrison (diver, sponge)

Fisheye



Third place winner: William Tomasso (Oro Verde)

BY STEVE LUCAS

I recall looking through the pages of SKIN DIVER Magazine 12 years ago. It was my dream to have my underwater photos printed on those pages. For me, the dream has become a reality. Many others still aspire to see the images they have worked to produce in this, the recognized journal of diving. In the years I have worked as a marine photojournalist I have often strolled among the exhibits of some of the better known underwater photo competitions. I frequently realize how much fine talent there is in our field. It seems only fair that more of these people should have the chance to see their work in print.

Fortunately, I am not alone in a desire to see new and aspiring photographers recognized. In a coordinated effort with SDM, Martin Sutton and Ahuva Zaid of Grand Cayman's Fisheye Photographic recently devised a new approach to underwater photo competitions. Photographers were treated as if they were on a magazine assignment. But, the photos could not be sifted from years and years of work: They had to be produced while on vacation in the Caymans, processed in the Fisheye Photographic lab and en-

Photo Contest WINNERS

tered in the contest immediately. Subject matter or types of camera and lenses used were not limited. The competition was open to any amateur and ran over a period of many months. Final judging was done by one of the best underwater photographers in the field, National Geographic's David Doubilet. Prizes were provided by Ikelite, Sea and Sea USA, Cayman Camera and Fisheye Photographic. The grand prize winner received a Nikonos IV-A camera, Ikelite 150L Substrobe, Ikelite console and quick release arm. The second place winner received a Sea and Sea 18 mm lens; third place, one week of diving aboard Fisheye's *F-Stop, Too*; fourth place, a Nikonos IV-A.

We are pleased to have the opportunity to recognize here the work of some of the world's best amateur underwater photographers as a part of the first Fisheye Photographic Open. >

I switched to the DUI® VOYAGER™

Fabric Dry Suit

Here's why ...

"Now I can dive year-round in warmth and comfort by merely adjusting the insulation under my suit. My Voyager™ gives me the flexibility and swimming ease of a thin strong fabric and has the convenience of Self-Don™."

"I don't need Howard's help anymore. But he's still my buddy."

"I invite you to participate in a special marketing survey and receive a free gift from DUI."

See your DUI Dealer Today!

Voyager™ Pat Pending

Howard shown in Patented DUI™ CF200 Dry Suit

DUI
Diving Unlimited International, Inc.

The Thin and Comfortable Diving System

1148 Delevan Drive • San Diego, CA 92102 • (619) 236-1203 • Telex: 697971

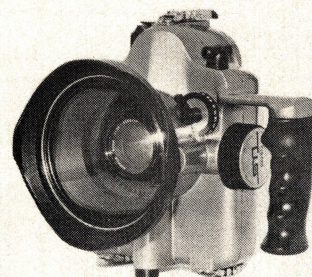
circle #119 on Reader Service Card

THE TUS PRO-LINE

For All Nikon Professional Cameras With Action Finder and Motordrive

FEATURES:

- Rugged cast aluminum housing anodized and finished in silver-bronze baked enamel
- All camera controls at your fingertips
- Weighs less than your camera in air — perfectly balanced underwater
- Low volume compact design fits in an aircraft carry-on
- Quick-change ports for 15mm wide angle to 105mm micro
- Water detector with both audio and LED indicator
- Internal lighting system for f-stop, shutter speed and frame counter
- Film loading with camera in housing.
- Rubber no-scratch lens gears
- Working depth 300 feet



Send \$1.00 for Fully Illustrated Brochure

Tussey Underwater Systems 7118 Foothill Blvd., Tujunga, CA 91042 (818) 249-2700

circle #120 on Reader Service Card

PADI PHOTO COMPETITION

WANTED Underwater Photos



Once again, the worldwide search is on for diving's finest underwater pictures by amateur photographers. PADI's Sixth Annual Underwater Photography Search/Competition is being held from August 1 to October 31, 1984. Submit your photograph to a participating PADI Training Facility today — as many as you like. Here is your chance to be published and to win big prizes.

EXCITING PRIZES

GRAND PRIZE WINNER

In addition to local and regional prizes, the Grand Prize Winner will enjoy a deluxe one-week diving package for two — compliments of Dive Bonaire/Flamingo Beach Hotel (a PADI Diving Society Resort Destination and Training Facility). The package includes unlimited diving, accommodations for seven nights (plus much more), and an Encore 7602 two-projector dissolve unit (compliments of Mirage Audio Visuals, Houston, Texas). The winning photograph will also be featured on the cover of *Diving Ventures* and *The Undersea Journal*.

ELEVEN REGIONAL WINNERS

Local winners are entered into the International Competition. The eleven Regional winners chosen (ten U.S. regions, one international) receive custom 16 x 20-inch color prints of the winning slides (compliments of Scuba Chrome), publication in *Skin Diver Magazine* and *The Undersea Journal*; and entrance into the Grand Prize judging.

OVER TWO HUNDRED LOCAL WINNERS

Diver gear, dive trips, and many other prizes may be awarded to local winners at over 200 participating PADI Training Facilities around the world.

ENTER ONLY AT A PARTICIPATING PADI TRAINING FACILITY

COMPETITION RULES

1. The PADI Underwater Photography Search/Competition is open to all amateur photographers. Only underwater photographs will be accepted.
2. All entries must be submitted to a participating facility for local judging. Local winning entries will then be sent to PADI Headquarters for international judging. Applicants may enter as many photographs as they wish; photographs may have been taken any time with no geographic restrictions.
3. Winners shall be chosen in one category: color slides. Participant's name, address, telephone number, facility name, and the title of the photo must be printed clearly on each entry.
4. An entrance form and a \$4.00 fee per entry to the participating Training Facility shall accompany all photographs submitted. The completed form acknowledges reprint rights for PADI International when proper photographic credit is given. The utmost care and handling will be given all entries, but no responsibility will be assumed by PADI International or any PADI Training Facility. Photographers retain ownership, and all entries will be returned after the judging has been completed.
5. Local judging will be done by PADI Training Facility staff members, international judging will be done by the PADI Underwater Photography Search/Competition Committee.
6. Winners will be chosen by a point system based on technique, lighting, and composition. Vertical format is preferential. Decisions by the judges shall be final.
7. The Search/Competition shall begin August 1, 1984 and end October 31, 1984. Regional and Grand Prize Winners will be announced in Spring 1985.

PADI® 1243 East Warner Avenue
Santa Ana, CA 92705
(714) 540-PADI (7234)

BUILDING A BETTER WORLD FOR DIVING THROUGH QUALITY EDUCATION

Film Festivals 'n Symposiums

CMAS WORLD CONGRESS

The CMAS (Confederation Mondiales des Activités Subaquatique) World Congress will be organized around Oceans Week Miami, April 1-7, 1985. It will celebrate the silver anniversary of the founding of CMAS and of the Underwater Society of America, one of the original members of CMAS. Major events planned include a Charter for the Oceans and special reunions of diving pioneers and explorers from around the world.

NAUI and the National Underwater Activities Program of the YMCA are working closely with the Underwater Society of America in organizing the Congress.

The Underwater Society of America is seeking ideas and offers for a major work of art, akin to the Christ of the Abyss statue in John Pennekamp Park, to be dedicated during the Oceans Week Miami program. The art will provide a permanent memorial to the spirit of world understanding through the sport of diving and the peaceful exploration of the seas and oceans. Those having ideas or knowing of artists whose work might be compatible with this are asked to communicate with John C. Fine, 150 Puritan Drive, Scarsdale, New York 10583.

SCUBAFEST '84

The Indiana University Dental School Scuba Divers will host Scubafest '84 September 14-15 at Blue Springs in Waldron, Indiana.

Friday evening, Sept. 14 there will be a Bratwurst and Bier picnic followed by a campfire, film festival and night dive. Saturday's main event will be an U/W treasure hunt.

For further information contact: IUDSSD, 1121 W. Michigan Ave., Indianapolis, IN 46202.

ATLANTIC ALLIANCE SHIPWRECK CONFERENCE

The Atlantic Alliance for Maritime Heritage Conservation will convene its first annual National Shipwreck Conference at Manteo, North Carolina, October 19-21. Open-forum sessions on a wide variety of topics including sport diver participation in shipwreck surveys, educational initiatives and regional clearing houses for shipwreck data are only a few of the planned subjects. A series of shipwreck legislative workshops are planned.

These concurrent sessions will be held at the Roanoke Island Marine Resources Center at Manteo, NC. The North Carolina Marine Education and Resources Foundation is the principle co-sponsor of

this conference. A Friday evening session to kickoff the conference will include a film festival highlighting shipwreck discoveries and recovery operations from the Pacific Coast, the Atlantic Seaboard, the Gulf of Mexico and the Great Lakes.

Those who would like to make a presentation should send abstracts to David D. Moore, P.O. Box 1360, Key West, FL 33040. Final presentations must be received by October 1.

Pre-registration fees are \$22 for members and \$30 for non-members and must be received by October 1. Late registration and fees paid at the conference are \$27 for members and \$35 for non-members. Pre-registration fees should be sent to Alliance headquarters, P.O. Box 27272, Central Station, Washington, D.C. 20038.

LISA TREASURE HUNT

The Long Island Sound America (LISA/84) Dive for Treasures of the Sound scuba diving contest is set for Labor Day, Monday, September 3, at 10:00 am at Penfield Lighthouse, Fairfield, Connecticut. There will be several plastic canisters, each containing a gift certificate for merchandise from Orbit Marine, to be recovered by the divers.

The LISA/84 Dive for Treasures of the Sound is open to all certified divers. The entry fee proceeds will go to LISA and toward a post-dive party.

The LISA/84 festival includes many events over, under and on the Sound as well as on its shores. The 10 day annual summer festival celebrates Long Island Sound and its importance to Connecticut and New York in recreation, commerce, ecology and education. Dates this year are August 25-September 3.

For more information or to register for the dive, contact Noel Voroba, Orbit Marine Sports Center, 3273 Fairfield Avenue, Bridgeport, CT; (203) 333-DIVE or foot of Broad Street, Stratford, CT; (203) 377-6969.

DIVERS DAY

On Sunday, September 9 Marine World/Africa USA, in conjunction with the Central California Council of Diving Clubs, will sponsor and host the Seventh Annual Divers Day at Marine World. The day program includes scuba, skin diving and underwater hockey skill demonstrations; educational seminars; underwater photography display; inner tube waterpolo competitions; display booths, raffles; travel information and safety exhibitions. The special events are in addition to all the Marine World shows and exhibits.

Special advance discount tickets are available at \$9.50 for adults and \$6 for children ages 5 to 12 years (under age 4 free). Each adult ticket has coupons for more than eight free air fills at local dive shops. The entrance price includes all

Divers Day and Marine World events except the Waterslide and animal rides. Tickets are available at San Francisco



photo/Glenn Pollock

Bay Area Dive shops or from the CenCal Council P.O. Box 779, Daly City, CA 94017.

Marine World is on U.S. Highway 101 in Redwood City, 30 minutes south of San Francisco. For more information, write to the Divers Day chairperson, Ann Hassbaum, 3449 Brittan Ave., San Carlos, CA 94070.

CO SCHOLARSHIP WINNER

College of Oceaneering student, Matt Valbusa, has been selected as the recipient of the Deborah Allen Brennan Memorial Scholarship, an award sponsored by the CO and jointly administered by NAUI.

The scholarship, one of six awarded annually by CO, was named after the first female graduate to complete a course in commercial diving at the college.



AQUA CAPSULE

AQUA CAPSULE II

PILE WEAR

circle # 122 on Reader Service Card

AQUA CAPSULE II

Our Newest Edition Now Joins Our Proven G-231 Neoprene Aqua Capsule. This Ultralight, Tough, PC-1011 Nylon Coated Drysuit Offers You the Ultimate in Comfort and Mobility. With the Addition of Harvey's Optional Pilewear, You Are in Command in All Water Temperatures.

**Quality - Comfort
Style**



SKINDIVING SUITS INC.
2505 S. 252nd St., Kent, WA 98032

THE BEAUTY OF A VIKING DRY SUIT IS MORE THAN SKIN DEEP.



HERE'S WHY.

- The solid rubber outer skin of a Viking suit is as tough and abrasion-resistant as a tire tread. On the inside, it is lined with tricot for your comfort and ease of dressing.
- The "safety orange" rubber surface dries quickly, rejects contamination, and gives minimal swimming resistance. That's why military combat swimmers use them.
- Dial your buoyancy with Viking's patented outlet valve. It's unique, totally automatic, and will maintain perfect buoyancy control for you. This valve has proven its reliability and superiority through 15 years of commercial use. Special Warfare Units rely on them.
- You can repair any accidental damage to your suit on the spot. Just wipe off the water and patch it yourself, at the site; it's as easy as patching an innertube.
- Look for it at your local dive shop. If they do not have a Viking demo, we will be happy to provide them with one.
- Whether diving is your business or your favorite sport, you should dive the best way – the VIKING way – Dry, Warm, and Comfortable.
- Send \$1.00 for our color brochure or catalog. Please indicate Sport Diving Brochure or Professional Diving Catalog.

VIKING DIVING
A Division of
VIKING
america, inc.

55 Old South Ave. • Stratford, CT 06497
203/377-6974 • Telex: 754843



Viking Canada
1165 Cream ST. S., R.R. #5
Fenwick, Ont. L0S 1C0 • 416/892-6522

AL BOEHM

Capt. Al Boehm, an early pioneer of East Coast wreck diving and a nationwide authority on rescue diving, died in mid-May. Boehm, who co-authored June's special section in SKIN DIVER Magazine on New York, New Jersey and Long Island, began his career in 1948 as



photo: Joe Bereswill

a commercial diver. Through the 1950s and 1960s, he served as staff scuba instructor for a major cruise ship line and as an underwater cinematographer. His work appeared in TV commercials.

Boehm held national and international scuba instructor ratings from NAUI, PADI, YMCA and CMAS and was a licensed teacher/faculty member of the Professional Diving School of New York/North American Hyperbaric Center on City Island, New York.

Those wishing to remember Capt. Al may send a donation in his name to the Divers Alert Network (DAN) as follows: Donation in Memory of Capt. Al Boehm, DAN, c/o Chris Wachholz, Box 3823, Duke University Medical Center, Durham, NC 27710.

MARITIME ARCHAEOLOGY COURSE

A 13 week course, A History of Seafaring Based on Maritime Archaeology, will be offered on Monday evenings, beginning September 17, at Boston University. The course is sponsored by the Massachusetts Bay Marine Studies Consortium.

Classroom meetings will include lectures, films, guest speakers and discussions. Field trips are also scheduled. Dr. Paul Johnson, curator of maritime history at the Peabody Museum in Salem, will be the primary instructor.

For further information contact the Massachusetts Bay Marine Studies Consortium, P.O. Box 110, Cambridge, MA 02142.

HALL/PEACE PHOTO TRIPS

The *Peace*, based at Island Packers Landing in Ventura, California, is the vessel being utilized by Howard Hall for his underwater photography courses off the

Channel Islands September 14-16 and December 7-9. The cost of the course includes three days of diving and photo instruction, meals, beverages, air fills and processing of film onboard the *Peace*. Hall's book *Successful Underwater Photography* will be used as the course text and photo equipment provided will include: large and small strobes, trays, arms, extension tubes, light meters, viewfinders and the Sea & Sea 18 mm lens. Participants must provide their own dive gear and any model Nikonos camera (available for rent). Students must bring a minimum of 10 rolls of Ektachrome slide film.

The courses are limited to 20 to maximize individual attention. For more information contact: Charter Boat *Peace*, 1061S-G Tierrasanta Boulevard, Suite 117, San Diego, California 92124; (619) 292-0768. 🌿

MANHATTAN STORE

Charley George, formerly of Scuba Plus, has opened a new facility, Scuba World. The new store, in the heart of Manhattan's upper west side, opens convenient opportunities for travel, retail sales, repairs and local diving for New York area divers.

Among the proposed overseas trips are expeditions to Roatan, Australia and the Red Sea. These trips round out a full schedule of travel to destinations such as Bonaire, Cayman and the Bahamas.

For information contact: Charley George, Scuba World, 167 West 72 Street, New York, NY 10023; (212) 496-6983. 🌿

CAVE/CAVERN ORIENTATION

The National Association for Cave Diving (NACD) will conduct a Cave and Cavern Diving Orientation Course for basic and advanced open water instructors, assistant instructors and divemasters October 27-28. It will take place at Manatee Springs State Park near Chiefland, FL.

Registration before October 15 is \$45; afterward it is \$60. For information contact: NACD General Manager, P.O. Box 14492, Gainesville, FL 32604 or call (904) 656-1223. 🌿

SCUBA PATROL

An International Scuba Patrol, similar to the National Ski Patrol, is being organized. The purpose is to teach safety, patrol diving areas for accident victims and offer first aid. To be accepted into the Scuba Patrol a diver will have to be certified and hold an advanced first aid card. The diver will then have to take a 16 hour course on diver-related first aid and pass an underwater test.

For information contact: Gene Riggs, Correjon Project, Morrison Knudsen Co., Inc., Box One M-K Plaza, Boise, Idaho 83707. 🌿

THE BIGGEST PROBLEM WILL BE YOUR BUDDIES, TRYING TO BUY IT OFF YOUR BACK.

Before the end of this season, a few lucky people will be diving with our new stainless tanks.

Virtually maintenance-free, rugged stainless steel.

To reserve your Justus tank, call 1-800-527-0068.

Or write Justus Enterprises, 1502 W. Cherry, Chanute, Kansas 66720.



circle #123 on Reader Service Card

Treasure

Brought To You By White's PI 1000

This is a Sophisticated Underwater Pulse Induction metal detector. It is easy to use, guaranteed to depths of 200 feet, and gives both an audible and visual target indication.



- Excellent Sensitivity for Coins, Rings, and Relics made of Gold, Silver, and Other Metals.
- Compare the PI 1000 Series 2 to Underwater Detectors Costing Twice the Price!

FREE CATALOG
AUTHORIZED DEALER
TOLL FREE: 1-800-547-6911



1011 Pleasant Valley Rd.
Sweet Home, OR 97386
Dept. SD-4
DEALER INQUIRIES INVITED

INTERNATIONAL CONTACT POINTS
White's Electronics Intl., Ltd.
13 Harbour Rd.
Inverness, Scotland IV1 1RY

Burns Scott Intl.
14 Queens Rd. - 11th Floor
Melbourne 3004
Eastern Australia

circle #124 on Reader Service Card

S-37 TREASURE FROM A FORGOTTEN WARRIOR

BY STEVE GILES

In the gray twilight of February 8, 1942 a lone American submarine prowls the dark waters of Makassar Strait, off the coast of Borneo. It is a desperate situation for this aging little sub, the S.37. It is alone in a hostile and uncharted passage, and in the path of a relentless Japanese surface fleet that has scored victory after victory and is seemingly invincible.

A periscope sweep of the darkening horizon by her executive officer, Lt. W. H. Hazzard, reveals the masts and upperworks of a fast approaching ship. It materializes into a deadly Japanese destroyer heading full bore for Makassar City.

Capt. James C. Dempsey, the S.37's skipper, correctly decides that this is an advance scout for some larger force, and allows it to pass unmolested. The destroyer is hardly abeam when four more destroyers appear on the horizon, hunting for trouble. Then, through the periscope there appears a ghostly caravan of larger ships forming in the shadowy distance. These shapes are too blurred and distant for accurate identification, but there is no doubt aboard that the little S.37 stands alone in the path of an immense invasion convoy!

Signal lights blink back and forth between warships and the transports they shepherd. A cruiser's searchlight flashes somewhere over the horizon. Without light, periscope sightings become extremely difficult and ships are hard to identify. In the gathering darkness Capt. Dempsey orders "Battle Surface" and the hunters become the hunted!

An attempt to reach the transports is foiled by the four screening destroyers, who pass directly in front of the S.37 in column. Japanese records show these destroyers as the *Hayashio*, *Kuoshio*, *Natsushio*, and *Oyashio*—all crack submarine killers. Dempsey is dead-set on attacking and with the convoy moving quickly out of reach he decides to take on the interposing screen—even though taking on four lethal Japanese destroyers in a sub built in 1919 could prove to be quite an exciting experience!

The S.37 charges in for the attack, her bow wave foaming in the moonlight. The sub's exec is on the exposed bridge operating a dummy pelorus, on which fire control depends heavily. The ingenious Lt. Hazzard has fitted the brass rim of the device with an embossment of brads for Braille reading in the dark. The little sub



photo/PPC staff Rich Cox

The U.S. submarine, S.37, was built in 1919. She received five battle stars during WW II and now rests in shallow water offshore San Diego, California.

Right: The author with the telegraphs recovered from the sunken submarine. Above: A beautifully restored telegraph.



photo/Jerry Parrott

has only four torpedo tubes forward, so one torpedo is fired at each of the destroyers in column and the seconds are ticked off. Thirty seconds after the third torpedo is fired a tremendous explosion rocks the third destroyer, the *Natsushio*. Fire and smoke belch from her midsection, which is buckled upward 20 feet above her bow and stern. The torpedo has penetrated the forward engine room and broken the ship's back. The surviving crew members are rescued by the *Kuoshio* while depth charges are dropped by the remaining destroyers in a vain attempt to sink the American submarine. The mouse has eaten the cat!

S.37 submerges and burrows deep to evade. The destroyers hunt but cannot find her. They next hear of her three nights later when she attacks still another destroyer in the Strait of Makassar: She misses that one. The intrepid little S.37 makes a notch in history for herself, for the Imperial Japanese Navy's *Natsushio* was the first enemy destroyer to be sunk by a United States sub in the Pacific.

The S-class boats were built as an improved version of the WW I type K, L and O-class submarines, and were the predecessors of the fleet type subs which made up the bulk of our modern subs during WW II.

The S.37 was laid down on December 12, 1918 by the Union Iron Works of San Francisco, California and was launched on June 20, 1919. It was sponsored by a Miss Mildred Bulger and commissioned on July 16, 1923 with Lieutenant Paul Glutting in command.

The early career of the S.37 was uneventful, except for a batteryroom explosion in September 1923 that left three dead and two seriously injured. It was an omen of things to come.

S.37 was eventually assigned to the Asiatic Fleet Submarine Force operating out of Cavite in the Philippines and was there when the war broke out in 1941. Practically obsolete at the outset of the war and plagued by mechanical breakdowns, she nevertheless contributed significantly to the need for submarines during the first months of the war.

Conditions aboard the old S-boats on wartime cruises in tropical climates were a nightmare no crewmember would ever

forget. Only one, the S.44, had any form of air conditioning. Temperatures inside the submerged boats ranged from 105 to 120 degrees. One of the S.37's junior officers wrote of life aboard her:

"The bunks beyond the wardroom are filled with torpid, skivvy-clad bodies, the sweat running off the white, rash-blistered skin in small rivulets. Metal fans are whirring everywhere—overhead, at the end of bunks, close to my ear. I am playing cribbage with the skipper, mainly because I do not like to wallow in a sweat-soaked bunk most of the day. I have my elbows on the table near the edge and I hold my cards with my arms at a slight angle so the sweat will stream down my bare arms, without soaking the pile of cards in the center. Overhead is a fine net of gauze to catch the wayward cockroaches which prowl across the top of the wardroom and occasionally fall straight downward. They live in the cork insulation which lines the insides of the submarine's hull. We've killed over 16 million cockroaches in one compartment alone. The deck in the control room is littered with towels, used to sponge up the water dripping off the men and the submarine itself. The food is routine—something canned. The dehydrated potatoes, onions and reconstituted carrots have the same general taste—like sawdust!"

The S.37 received five battle stars during WW II, was also credited with sinking the 2,776 ton *Tenzan Maru* and rescuing allied survivors from the Dutch cruiser *De Ruyter*, sunk in the Battle of the Java Sea. Severe mechanical problems and breakdowns finally sent her stateside, where after a refit she served as a training ship through 1944.

On February 6, 1945 the S.37 was decommissioned and after being stripped was sunk while in use as a target for aerial bombing the following spring (somewhere, according to Naval records, "off the California Coast"). Later there was a private salvage attempt that only succeeded in bringing her up from deeper water to where she rests today.

The first indication we had of a submarine sunk in shallow water offshore San Diego was an ominous note in the 1976 *International Divers Guide* which read:

"World War II submarine (wreck). Just

over the surfline a short distance north of Tijuana Slough, a WW II vintage sub lies in 20-40 feet of water. Lobster in quantity may be found around the hull along with most species of local fish. Although the hatch to the sub is open, divers are advised not to loiter around it as *strong seasurges can suck a man inside before he knows it!*"

This sounded inviting—shades of the true adventure and dangerous excitement wrecks are supposed to possess. One member of our group, Herb Miller, did a fine bit of research and came up with a definite location. We set up a trip to find and dive this unknown sub.

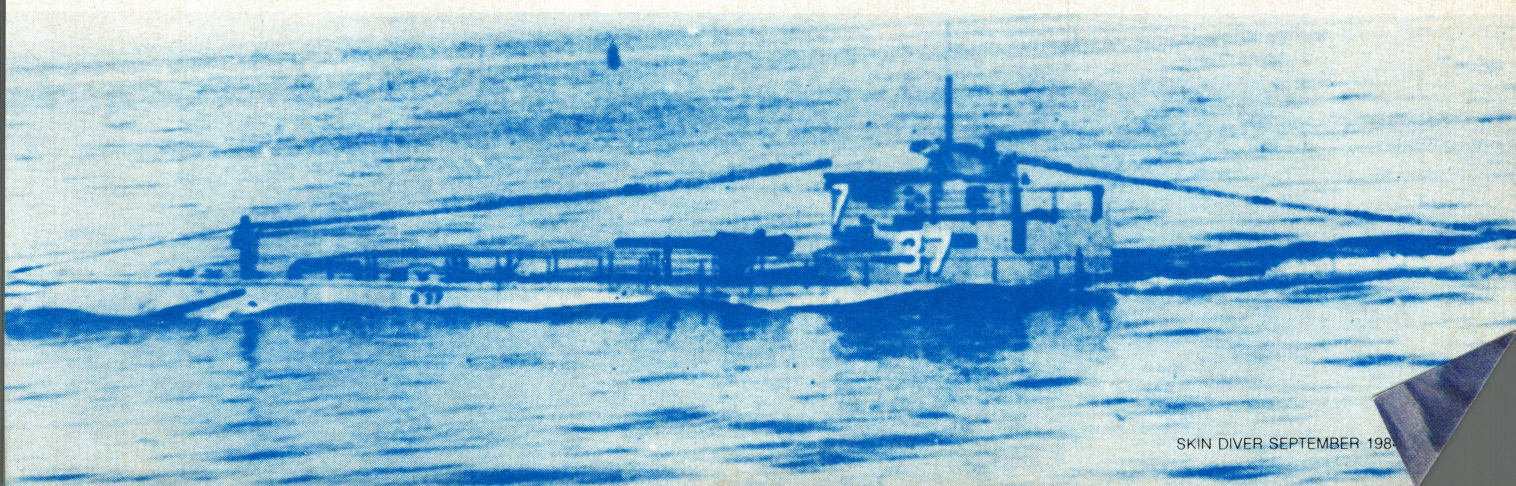
Finding it turned out to be as easy as dragging an anchor across the sandy bottom until you got a submarine-size snag. Being in such shallow water had its advantages as well as its disadvantages—lots of bottom time with no decompression, but with the waves breaking a scant 50 feet away one could find himself surfing, instead of diving, rather fast. Also, the periscope sheers extended almost to the surface and you could conceivably find your own boat lying next to the sub if the boat was allowed to ride the swells at anchor too close to the sheers.

Our first group venture took place on a truly beautiful summer day—perfect diving weather; sunny, calm and warm. We didn't know quite what to expect, but with the sub well known to local divers and in a shallow spot, we didn't get our hopes up for finding a virgin wreck.

Our preliminary dive was spent exploring the outside of the sub's hull, where the teakwood decking was still mostly in place. The pressure hull was visible underneath the overgrown decking, with various pipes running here and there. The torpedo tube doors were at the bow, while the conning tower and its open hatch reached upward for the surface above. The entire hull was coated with a large variety of seagrowth, making it look like a cigar-shaped reef. She was amazingly intact!

We were able to prowl her entire length, occasionally finding lobster manning various positions aboard. Visible upon arriving at the aft end was her unique rudder and stern planes, partially buried

(Continued on Page 42)



Never in the history of the sport have divers banded together so tightly and rallied for a common cause, preventing the extinction of their cherished, world recognized red and white flag. The 27 year old symbol of our sport has been saved, thanks to thousands of letters that you—the divers of America—wrote to Congressmen, Senators, the Coast Guard and even the President of the United States.

Commander G.R. Siddall, United States Coast Guard Executive Director, Rules of the Road Advisory Council, in a personal letter to me, wrote: "When a vessel is not restricted in its ability to maneuver due to the diving operation and can maneuver as required by the Navigation Rules, it is not necessary to exhibit the A flag signal." The commander also agreed with two statements submitted to him by diver Fred Calhoun, Boston, Mas-

sachusetts: 1. Divers in the water are not to be deploying Alpha flags—they are to deploy the red and white divers flag. 2. Not all vessels engaged in diving operations are by definition restricted in their ability to maneuver. Those that are not, do not have to fly the Alpha flag.

Many divers who wrote to Commander Siddall, complaining about the frustration and aggravation fostered by the bureaucracy in regard to the Alpha flag versus divers flag controversy, received a response to: "Dear Interested Party..." The letter stated that the whole matter was referred to the Rules of the Road Advisory Council (RORAC), a 21 member group of experts from all segments of the marine community. (Note: There were no sport divers represented in this group of "experts.") Letters from divers expressing concern that they be allowed to continue the display of their red and white flag were examined and discussed.

The letter continues: "The council recommended that the Coast Guard prepare an explanatory interpretation of Rule 27 so that divers and boat operators will understand the differences between the two signals and that the law does not prevent

photo/Geri Murphy

Diver's Rally Saves Flag

BY ELLSWORTH BOYD



display of the red and white flag. RORAC reaffirmed the need and sufficiency of the A flag signal which applies to vessels engaged in diving operations if restricted in their ability to maneuver. RORAC acknowledged the red flag with diagonal white stripe as the identifying flag for divers and encouraged its use. This flag may be used in conjunction with the A flag signal or may be used alone when the A flag signal is not required.

"A vessel conducting diving operations, whether underway or at anchor, would usually be considered restricted in ability to maneuver if divers are attached to the vessel while diving. If divers are free swimming from the vessel, this may not be so and it is the responsibility of the operator to determine if the vessel's movements are restricted by the diving operation. If the vessel cannot keep out of the way of other vessels as required by the Navigation Rules, the vessel must exhibit, by day, the A flag signal.

"In practice, for vessels tending free swimming divers, if the vessel operator feels that the diving itself does not interfere with the maneuverability of the vessel, the A flag signal is not required. The traditional red flag with diagonal white stripe is widely recognized and its use should be continued."

The Coast Guard has a liaison with Congress through what they call a Congressional Affairs Staff. Commander Tom Nunes, Deputy Chief of the Staff, knowledgeable about the flag issue, revealed some facts resulting from the write-in campaign by thousands of divers.

"We received so many letters from members of Congress on behalf of the divers," Commander Nunes said, "I had to write a blanket letter of explanation and send it to all members of Congress. That's how overwhelming diver complaints were to their Congressmen and women. Our letter to Congress stressed the common sense factor, which I think is the key to the whole issue."

Nunes, former skipper of a 200 foot, 1,400 ton vessel, speaks in a down-to-earth practical manner without bureaucratic jargon. "The divers flag is steeped in history and tradition," he says. "Divers... should take a pragmatic approach. In other words, apply the rules with prudence and common sense."

I asked about procedures for getting a sport diver on the Rules of the Road Advisory Council and Commander Nunes referred me to the commandant's office. There are 21 members on the RORAC, all men, from 13 different states, some as far away as California and Oregon. They include barge operators, recreational boaters, ferryboat captains, boat builders, yachting council representatives, lake pilots, attorneys, the director of the Institute for Survival Technology, a commercial diver and others. There are no sport divers nor women on the RORAC.

In response to my request about how

we might place a sport diver on the RORAC, Commander Siddall wrote: "Members of the Rules of the Road Advisory Council are appointed by the Secretary of Transportation. In November of last year the Coast Guard advertised in the Federal Register that seven vacancies would occur on the Council in June 1984. A February 15, 1984 deadline was established for receiving completed applications from persons interested in filling those vacancies. Although it is too late now for someone to enter the selection process, I would certainly be glad to receive an application for consideration



photo/courtesy Don Stewart

should any unanticipated vacancies occur during this year. Next fall, the process will begin again and we will announce vacancies in the Federal Register for the following June. A person submitting an application now must inform us again during the next application period that he or she is interested in being considered to fill one of the advertised vacancies."

Divers interested in applying should write to: Commander G.R. Siddall, U.S. Coast Guard, GNSR 3/14, Washington, D.C. 20593; phone (202) 245-0108.

In standing up for their rights and defending the use of a flag they originated nearly 30 years ago, divers have come into their own. They've established a strong, united voice—a force to be reckoned with. Here are some letters divers wrote in defense of their cherished symbol of sport diving: Larry Cushman, National Association of Diver Medical Technicians, Houston, Texas, wrote: "The recent change relating to the use of the Alpha flag to identify vessels which cannot maneuver because they are supporting dive operations has had a very unfortunate effect on the recreational and scientific diving communities. It is tragic that the highly visible diver's flag, which took

25 years to promote to its present level of almost complete general public recognition, is to be replaced by an unfamiliar symbol that has inferior visual impact on the water. I urge the U.S. Coast Guard to recognize the red and white divers flag at the federal level so its meaning and legal status is confirmed nationally."

John Scheuchenzuber, Quest Underwater Explorations, Lancaster, Pennsylvania, wrote: "If boaters in inland waters were licensed captains, perhaps my concerns would be more minimal, but they are not. In the 30 years the dive flag has been in use, only a small percentage of boat operators have learned its meaning. But when it is finally being recognized, the government changes it! Standardization is great, but we're talking about human life and safety. It has taken 30 years to convince some boaters that the red and white flag does not mean 'party on board' and it will probably take longer to convince them of what the mundane Alpha flag indicates."

George Landgrabe, Maitland, Florida, wrote: "In the late 1950s, when I started diving, I actively promoted the acceptance of the newly introduced red and white divers down flag. Over the last 25 years I have explained its use as a dive instructor, flown it faithfully as a diver, and cussed boat owners who did not heed its meaning. Today the flag has become recognized by both divers and boaters as if it were originally written on one of the stone tablets that was the forerunner of the Rules of the Road. I feel that the time and effort my fellow divers and I have spent promoting the red and white flag were well spent and I don't have another 25 years left to promote a new one. But I do have a son who dives and I am concerned for his safety."

Dick Dresie, Kailua-Kona, Hawaii, wrote: "Through an error in judgement, the Alpha flag has been designated the divers flag. This unfortunate situation should be rectified. You see, we divers have a flag and we love it! It is recognized around the world for what it is—a very bright and easily seen safety flag that tells observers there is a diver in the area and to show caution. It is very visible and recognized worldwide. I've had the pleasure of diving in many exotic locations, as well as off the coasts of the United States, and the divers flag is the one insignia that all people recognize as the diver's mark of distinction."

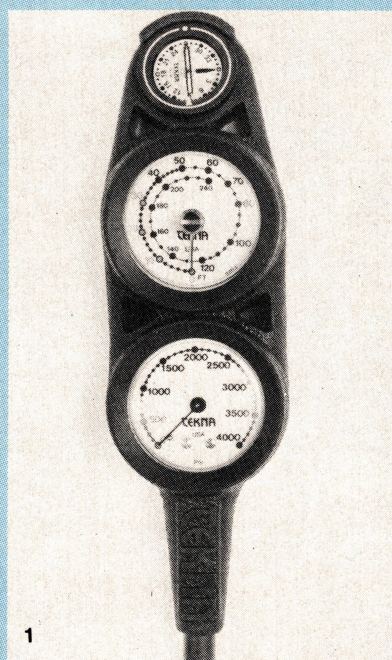
Jack Hughes, Portsmouth, Ohio, wrote: "I have been diving for 22 years and have been team commander of a sheriff's department underwater search and recovery group for 16 years. We have spent many hours over the years educating boaters and the public about the divers down flag. We've been successful with a speakers' program, posters, etc., which have enhanced the safety of my team and myself. The international code

(Continued on Page 38)

1984

FALL SHOPPER'S GUIDE

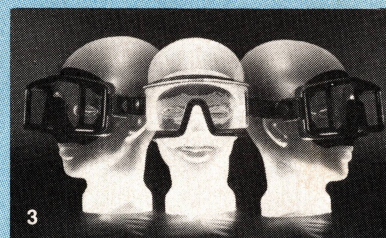
The products listed in Shopper's Guide are those which the editors feel are of interest to readers. All specifications and claims are supplied by the manufacturers or sellers, who bear responsibility for their accuracy. It is impossible for SKIN DIVER to obtain samples of all products listed for evaluation and verification of manufacturer's claims. This listing is provided as a free service and vendors of U/W equipment are invited to submit information and black and white photos for consideration.



1 Instrument Console—The Tekna T-2750 three gauge combo (\$174.95) includes a samarium cobalt magnet compass, expanded scale maximum depth gauge and 4000 psi submersible pressure gauge. A T-3101 Digital Dive Timer module (\$64.95) is optional but a receptacle on the combo will accept it.



2 Drysuit—The Odyssey Fabric Drysuit from DUI is made of Flexane® with Fusion-Plus® process machine sealed seams, providing comfort and reliability. The suit has latex neck and wrist seals, attached heavy duty socks, shoulder zipper and inflation/deflation valves (also available without valves). From \$400.



W H A L E
T W I L I G H T



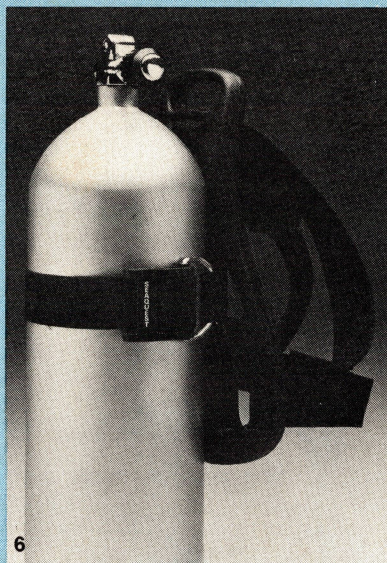
M A N T A
F A N T A S Y



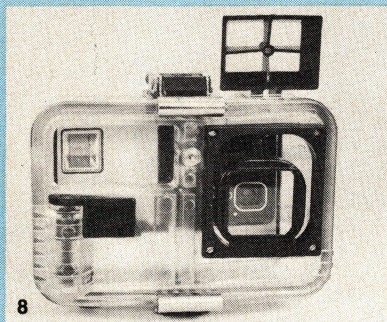
3 Wide View Masks—Dacor's Tri-Vista dive masks have three lenses for wide angle vision. With a streamlined shape, the masks have a soft, comfortable face seal. The slide strap adjustment locks to a quick fit, even while wearing gloves. Black with blue rim or black with yellow rim, \$47. In silicone with blue rim, \$75.

4 Marineline Posters—These posters, featuring color photos by Howard Hall, measure 24 x 30.5 inches. Whale Twilight shows a gray whale breaching in kelp. Manta Fantasy shows a diver riding on the back of a gigantic manta ray. \$20 each. Marcor Pub., 3600 S. Harbor Blvd., Suite #320, Oxnard, CA 93030.

5 Dive Knife—The no. 8532 knife measures 12 inches overall and has a seven inch blade of series 400 stainless steel. The blade has a line cutter notch, long cutting edge and serrated edge, plus a pointed tip. The knife comes with a solid steel butt cap and a locking sheath. \$54.50. From Wenoka Cutlery dealers.



6

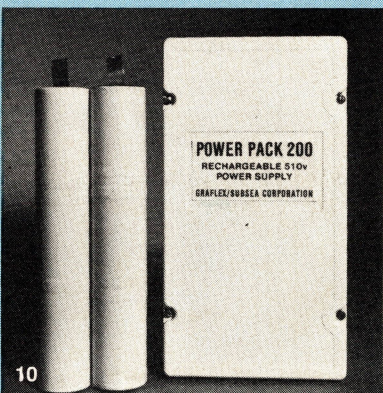
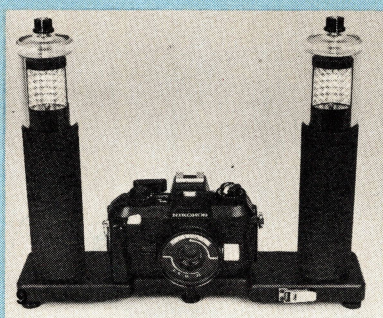


8

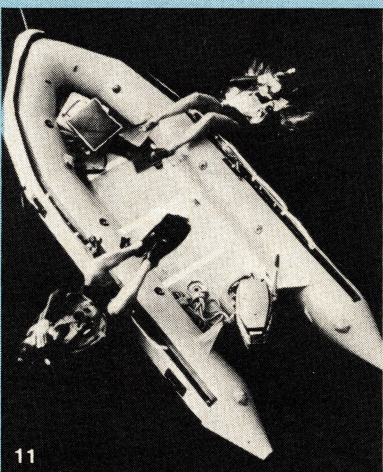
6 Tank Band—SeaQuest's two inch Tank Band Buckle is now available on a band which fits European 15 liter tanks. The 15 Liter Tank Band will fit tanks with diameters of 171-203 mm. It is made of tough nylon webbing and stores flat for easy transport. With a backpack assembly, \$52.50. Band is \$28.50 separately.

7 Ankle Weights—Adjustable, these distribute weight in the lower leg area to minimize swimming fatigue. Made of soft neoprene with heavy duty nylon stitching, each ankle weight carries five lbs. max. of lead shot and closes with a quick-lock buckle. \$23. DUL, Inc., 1148 Delevan Drive, San Diego, CA 92102.

8 Disc Housing—The Ikelite U/W housing is available to fit Kodak 2000, 3000 and 4000; Minolta 5 and 7; Ansco HR50; and Keystone 1050 disc cameras. It features a high grade optical plexi front with water correcting lens and shoe mount. Sportfinder included. Kodak version \$54.95, others are \$69.95.



10



11

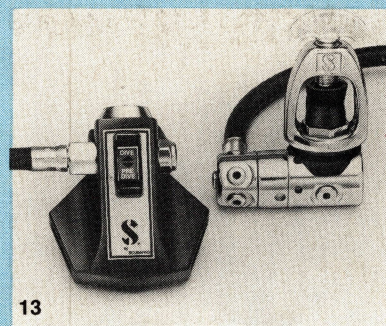
9 Underwater Strobes—The Light Handle is a complete U/W flash system for all Nikonos cameras. It features two strobes, which can be angled to cover 90 to 180 degrees. The entire system can fit under an airline seat. \$575. Light Handle Enterprises, 2575 N.E. Kathryn Street, #16, Hillsboro, Oregon 97124.

10 Battery Pack—Graflex/Subsea Corp. offers a rechargeable 510 volt battery pack. The Power Pack 200 is the same size as the standard 510 volt dry cell and slips in to replace it. Power Pack has two ni-cad batteries and charger. \$180. Standard charge time is six hours but a three hour charger is available.

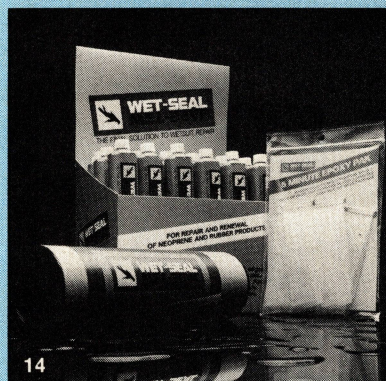
11 Inflatable—The Achilles SD-140, six passenger sportboat has air chambers with neoprene lining on the inside for flexibility and Hypalon on the outside for durability. The 14 foot long boat has a removable bowdodger, wood transom, swivel oarlocks, plywood floorboards, double-capped inflation valves. \$2,150.



12



13



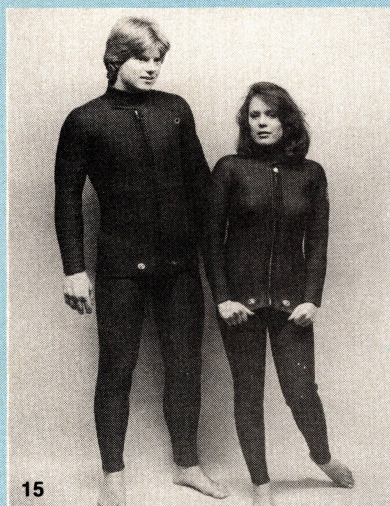
14

12 Scuba Fill Enclosure—Eagle Air Systems' Scuba Fill Station offers both "wet" and "dry" fill modes. A safety interlock prevents operator from accidentally filling exposed cylinders. Inlet pressure gauge, fill valves and fill pressure gauges. 60-400A, \$1,450. 60-400B (additional gauge and regulator), \$1,995.

13 Regulator—Scubapro's Mark X, A.I.R. I regulator combination features a compact, lightweight first stage with a 360 degree swivel, two high and five low pressure ports. The second stage has a fiberglass reinforced polyester case and is aerodynamically shaped to take full advantage of vacuum assist. \$295.

14 Repair Products—Repair products from Wet-Seal include neoprene cement sold separately (\$4.50), a repair kit including the cement and other materials necessary for heavy duty repair (\$6.95) and a five minute epoxy pack (\$5.95). The two part formula for the epoxy mixes right in the package, eliminating mess.

1984 FALL SHOPPER'S GUIDE



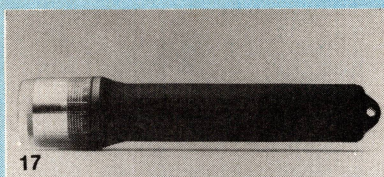
15



16

15 Custom Wetsuits—Skin Diver custom wetsuits come in men's and women's styles and feature high pants and sewn seams. 1/4 or 3/16 inch neoprene in nylon I (\$61.95) or nylon II (\$101.95). Gloves, boots and hoods also available. From Skin Diver Wet Suits, 1632 South 250th, Kent, Washington 98032-5499.

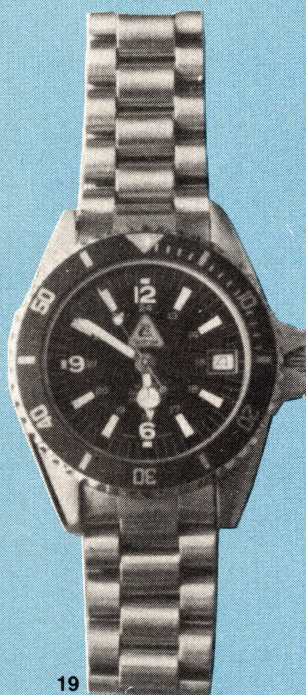
16 BC Jacket—Dacor's BXD Deluxe Seachute Jacket is made of urethane coated nylon and it has a quick-purge in the inflation hose. Features include: two large pockets (slanted for easy access), drain plug, D-rings and wide waistband. BXD-M (medium) \$420, BXD-L (large) \$425, BXD-XL (extra large) \$430.



17



18

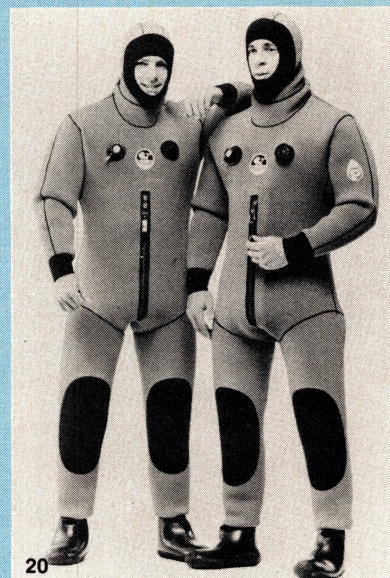


19

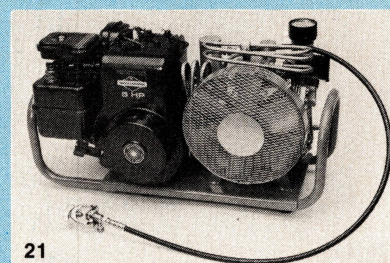
17 Underwater Light—The Hylite from Oceanic will fit in a BC pocket or attach to an underwater strobe for use as a modeling light. The bright quartz halogen lamp is powered by a rechargeable power pack or alkaline batteries. Rotary switch in the lens head. Non-rechargeable Hylite \$23.50, rechargeable \$76.

18 Flexible Video Housing—The flexible underwater video housing from Ewa comes in models for Sanyo and Sony Beta cameras and models for JVC's camera with recorder and Kodak's 8 mm video. Housing is made of double laminated PVC with built-in optical glass lenses. \$199. From Pioneer & Company.

19 Dive Watches—Cressi-sub dive watches are precision time pieces, water resistant to 660 feet. They are available in gold plate, stainless steel and in combination stainless and gold. The watches have one-way bezels. All have luminous faces and hands for reading in dim light. Men's and women's styles, \$150-\$420.



20



21



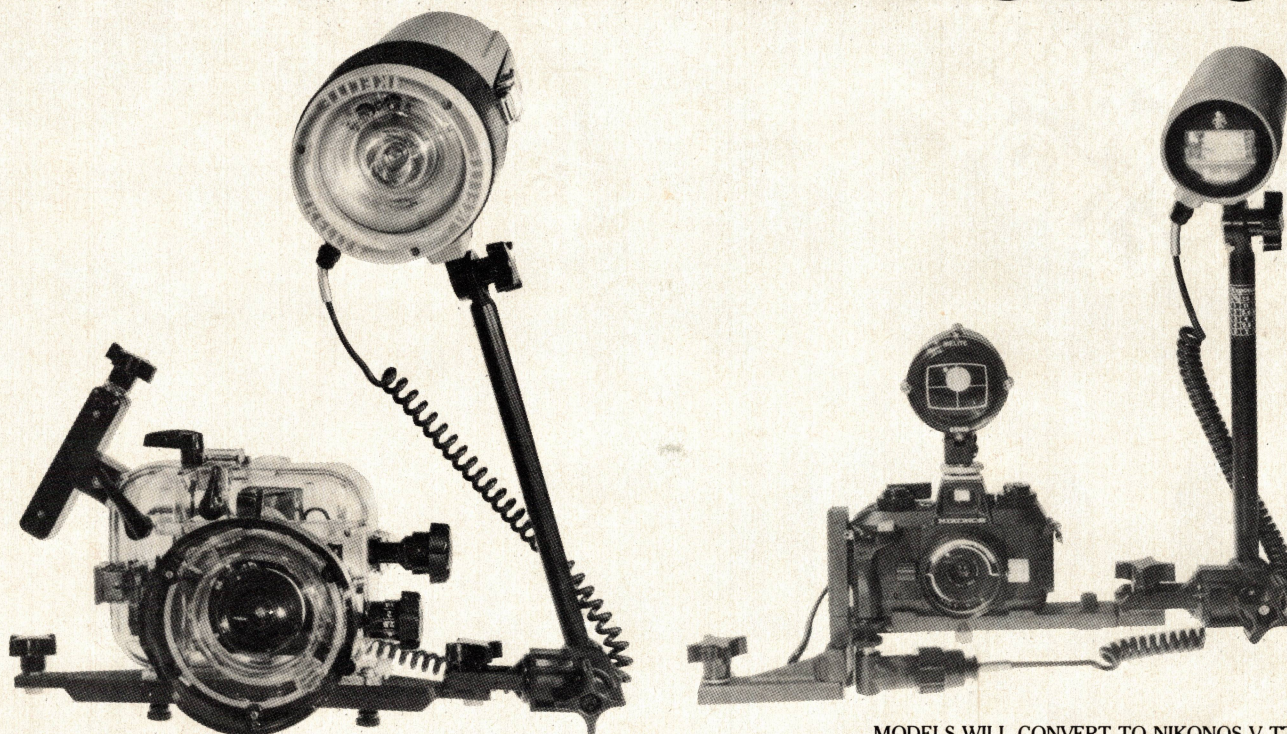
22

20 Drysuits—Parkway's Unisuit has been redesigned to eliminate crotch and underarm seams and the wrist seals have a new tapered shape. It is available in standard sizes in blue, black or orange, has Cyclocac® buoyancy control valves and patented neck seal. The front to back zipper allows easy entry. \$830.

21 Portable Air Compressor—American Radial is marketing Coltri air compressors. The 70 pound MCH-6 delivers 3.5 cfm and 4,440 psi. The MCH-6 is a four-stage, filtered, fan cooled system, measuring 23 x 12 x 13 inches. \$1,650. The 130 pound MCH-12 (not shown) offers 7.0 cfm and 4,440 psi. \$5,000.

22 Folding Knife—The Scubapro Folding Diver's Knife has a three inch blade of series 400 stainless steel for holding an edge, plus handle, pins and lock mechanism of 300 series stainless for corrosion resistance. Sharp edge and serrations. Measures 4½ inches when folded and weighs only 3¼ ounces. \$10.

IKELITE SUBSTROBES



MODELS WILL CONVERT TO NIKONOS V TTL.

	MANUAL OR AUTO STROBE	SURFACE GUIDE # ASA 25	EXPOSURE AT 3' ASA 64	COVERAGE ANGLE deg./lens	POWER SOURCE (& CHARGER)	POWER SETTING	ENERGY RATING watt-sec	NUMBER OF FLASHES	RECYCLE TIME	SLAVE MODE	AIMING LIGHT
SUBSTROBE M	M/A	45	f/5.6	65°/28mm	4 AA	Full	45	250	5 sec	No	Option
SUBSTROBE MS	M/A	45	f/5.6	65°/28mm	4 AA	Full	45	250	5 sec	Yes	Option
SUBSTROBE 75	M/A	45	f/5.6	110°/15mm+	Non-removable ni-cad incl. (CI)	Full 1/2	75 40	150 300	3 sec 2 sec	Yes	Yes
SUBSTROBE 150	M/A	60	f/8	110°/15mm+	Removable ni-cad incl. (CNI)	Full 1/2 1/4	150 75 40	150 300 600	6 sec 3 sec 2 sec	Yes	Yes
SUBSTROBE 225	M/A	75	f/8-f/11	110°/15mm+	Removable ni-cad incl. (CNI)	Full 1/2 1/4	225 110 55	120 240 480	6 sec 3 sec 2 sec	Yes	Yes

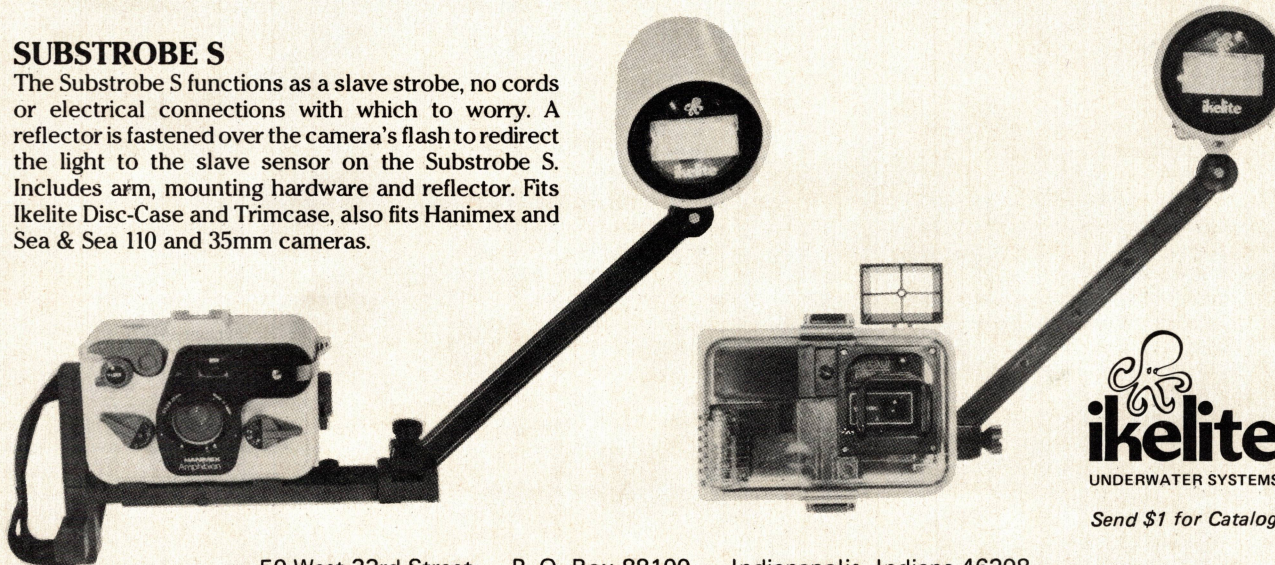
M/A: Manual Strobe/add FLASH MONITOR for auto exposure.

CI: Charger Included

CNI: Charger is NOT INCLUDED

SUBSTROBE S

The Substrobe S functions as a slave strobe, no cords or electrical connections with which to worry. A reflector is fastened over the camera's flash to redirect the light to the slave sensor on the Substrobe S. Includes arm, mounting hardware and reflector. Fits Ikelite Disc-Case and Trimcase, also fits Hanimex and Sea & Sea 110 and 35mm cameras.



ikelite
UNDERWATER SYSTEMS

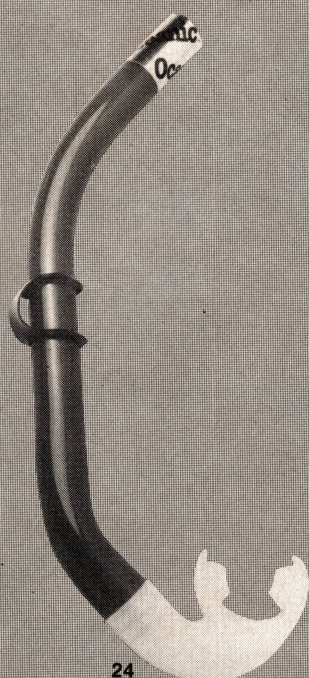
Send \$1 for Catalog

50 West 33rd Street P. O. Box 88100 Indianapolis, Indiana 46208

1984 FALL SHOPPER'S GUIDE



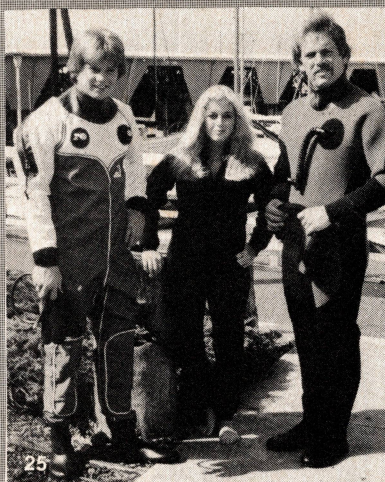
23



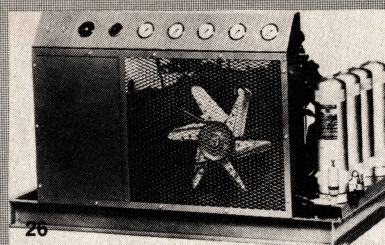
24

23 T-shirts—Surface Wear T-shirts from Deep Seas are 100 percent preshrunk cotton. (Tank tops are also available in 50/50 cotton/polyester.) Scuba T-shirt comes in red, blue and black. Diver design comes in black only. \$8.95 plus \$1.25 postage and handling. Deep Seas, 8230 Windmill Farms, Cotati, CA 94928.

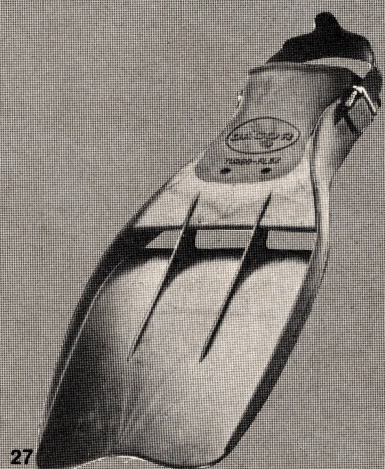
24 Snorkels—Ocean Pro Snorkels feature a large, flexible, translucent barrel in blue, orange or gray. The mouthpiece is designed to allow an overbite which reduces jaw fatigue. The mouthpiece swivels 360 degrees to allow precise positioning of the snorkel. Barrel curves around diver's head. \$17. Oceanic.



25



26



27

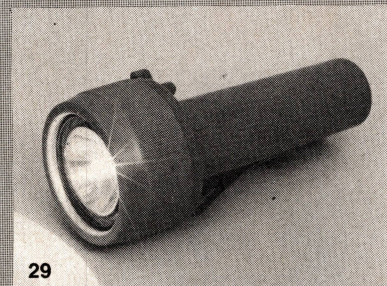
25 Drysuit Outfits—The PC-1011 drysuit (left) is made of flexible nylon pack cloth. It uses the Canada Dri-Valve inflation/deflation system (\$425). The NT-1013 drysuit (right) is 1/4 inch nylon II neoprene—\$375 with oral inflator (dry valve system is available). The pilewear undergarment is \$75. From Harvey's.

26 High Pressure Compressor—The stationary, high pressure compressor assembly from American Bristol features a four stage compressor; gas, electric or diesel power; monitors; controls; and FreshAir purification system. The assembly is available in models providing 5-100 scfm, rated at 5,000 psi. From \$4,700.

27 Graphite Fin—Dacor now offers a graphite version of its Turbo Flex fin. The graphite/Turbolene composite gives the blade added snap-back and recovery. Blade design increases power and decreases resistance. Optional drain holes are on top of foot pocket. Available in small, medium and large \$55-58.



28



29

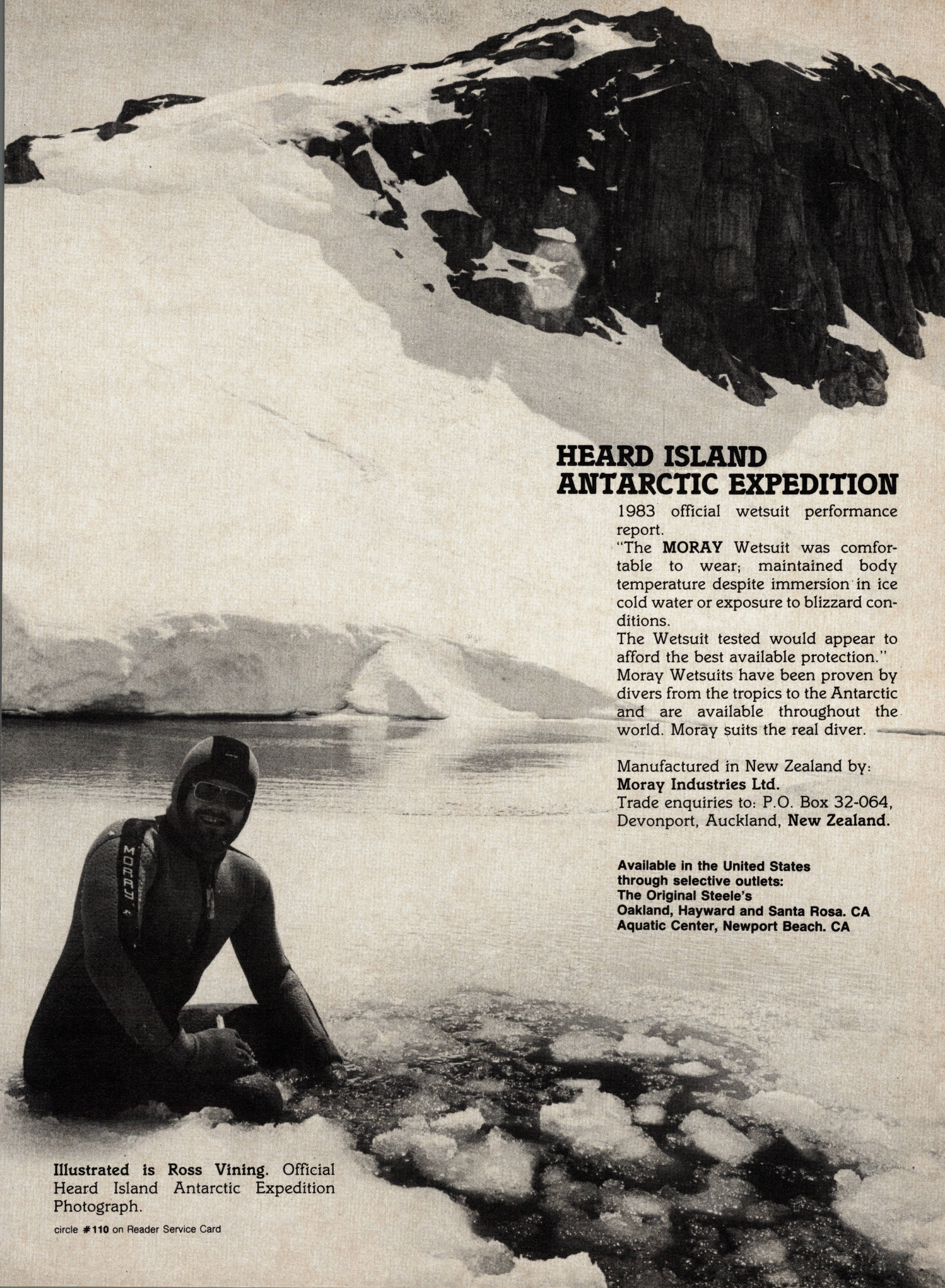


30

28 Bottle BCs—SeaQuest now offers a variety of buoyancy compensators capable of holding integrated five liter compressed air cylinders for emergency use. Models, from left: Deep Water (9248-33), \$130; Deluxe White Water (9240-33), \$170; Sea Jacket 500-B (9250-33), \$330; Sea Jacket IV (9290-25), \$380.

29 Halogen Light—The Ikelite Mini C-Lite now features a bright halogen bulb fitted with a precision reflector for a high intensity beam. The light measures six inches long and three inches in diameter and utilizes four C-cells. Non-rechargeable version is \$24.95; rechargeable is \$59.95. Light is guaranteed to 300 feet.

30 Shorty Wetsuits—The Ambassador line of wetsuits from Henderson Aquatics features long sleeved, high cut, step in jackets with a wide accent stripe. The suits are available in Lycra spandex outer, soft terry inner and feature Lycra trimmed edges. One-eighth inch thickness is ideal for warmer waters. \$250.

A black and white photograph of a man, Ross Vining, kneeling on a large, flat ice floe in Antarctica. He is wearing a dark wetsuit with "MORAY" written on the sleeve, a hood, and goggles. He is smiling at the camera. In the background, there are jagged, snow-covered mountains and a body of water.

HEARD ISLAND ANTARCTIC EXPEDITION

1983 official wetsuit performance report.

"The **MORAY** Wetsuit was comfortable to wear; maintained body temperature despite immersion in ice cold water or exposure to blizzard conditions.

The Wetsuit tested would appear to afford the best available protection." Moray Wetsuits have been proven by divers from the tropics to the Antarctic and are available throughout the world. Moray suits the real diver.

Manufactured in New Zealand by:

Moray Industries Ltd.

Trade enquiries to: P.O. Box 32-064,
Devonport, Auckland, **New Zealand.**

Available in the United States
through selective outlets:

The Original Steele's

Oakland, Hayward and Santa Rosa. CA
Aquatic Center, Newport Beach. CA

Illustrated is **Ross Vining**. Official
Heard Island Antarctic Expedition
Photograph.

circle #110 on Reader Service Card

There Is Only One PADI International College

That's important, because if you're going to invest up to eight weeks or more of your life and a substantial amount of money to become a well-trained diving professional, you need to consider how that time and money will be spent. If it's spent at PADI International College — now a part of PADI Headquarters itself — it will be spent learning from the very same people who created systems of education, travel promotion and retail management acknowledged as those that are making the diving industry expand and grow. It will be spent at the very heart of the diving industry. You'll have a chance to meet and speak with the kind of people who can make your dive-industry career a reality: dive store owners, equipment manufacturers, magazine publishers and other diving business-people — many of whom are located here in the Los Angeles/Orange County area. You'll also have placement into the industry's largest system of dive stores and resorts provided for you. It will be spent at a facility designed to make you feel like the true diving professional. After hours, you can relax at our modern, apartment-style residences or enjoy the many places to go and things to do that are unique to Southern California. When you compare facilities, staff, curriculum and opportunities, there is only one choice — PADI International College.

Discover how you can take advantage of the opportunities available today at PADI's own training and development center for diving professionals. Call Jim Williams, our College Dean. (714) 540-7234; toll free (800) 223-8697. Outside California, toll free (800) 235-3434. Telex 678400 PADI INT SNA.

1243 E. Warner Ave. • Santa Ana, CA 92705 • (714) 540-7234 • Telex 678400 PADI INT SNA

Name _____ Zip _____
 Address _____ State _____ Age _____
 City _____
 Phone () _____
☐ Gold Curriculum (8 weeks) ☐ Gold Prep (1 week) ☐ ITC (9 days)
☐ ITC Prep (2 weeks) ☐ Rescue Diver Course for Instructors and Candidates (1 week)
☐ Retail Dive Store Sales/Operations (2 weeks) ☐ Professional Equipment Repair (1 week)
☐ U/W Photography for Instructors and Candidates (1 week)

PADI OPEN WATER INSTRUCTOR TRAINING RETAIL DIVE STORE
 OPERATIONS EQUIPMENT REPAIR UNDERWATER PHOTOGRAPHY
 1-9 WEEK CURRICULUM OPTIONS AND PREPARATORY COURSES
 Approved for veterans • Approved by the State Superintendent of Public Instruction
 • Approved for vocational rehabilitation by the State of California

circle # 126 on Reader Service Card

DIVERS FLAG

(Continued from Page 31)

flag Alpha is totally unacceptable, not only in terms of size and color, but remains meaningless and adds significantly to the already inherent danger a diving team such as ours must face."

Lewis Sayre, Miami, Florida, wrote: "I have taught boating safety through the Red Cross, Coast Guard Auxillary and Power Squadrons and have been involved with National Boating Safety Conferences and the Power Squadron's National Safety Committee. My major

WHEN TO USE THE ALPHA FLAG/DIVERS DOWN FLAG

Divers Down Flag

- On floats being used by divers
- On vessels supporting divers that are not restricted in their ability to maneuver

Alpha Flag

- On vessels supporting divers that are restricted in their ability to maneuver

DIVERS FLAG BILL INTRODUCED

Congressman Guy V. Molinari (R-NY) has introduced a bill (H.R. 5732) designed to gain official recognition for the divers down flag. If enacted it would amend the Inland Navigational Rules Act of 1980 by inserting a description of this flag. In addition, the bill would require all vessels to fly that flag whenever engaged in recreational diving. The bill would not change the existing Alpha flag display requirements. Rather, it is designed to supplement those regulations by requiring the display of the divers down flag as well.

To ensure the passage of H.R. 5732 divers, as well as their clubs and councils, should write to both their Congressman and Senator, requesting that they either become a co-sponsor of Congressman Molinari's bill, or vote for it when it reaches the floor. Divers can obtain a copy of H.R. 5732 from Congressman Molinari, as well as express their support for him, at the following address:

Congressman Guy V. Molinari
 Fort Wadsworth Building 203
 Staten Island, NY 10305

point has to do with the difficulty of training the public to recognize the Alpha flag. My concern is that the public will view the Alpha flag as just another one of many different signal flags. I believe the average non-trained boater will not be able to, or care to, learn the difference between the Alpha flag and the rest of the international code flags. The red and white flag

ewa marine

Tough flexible, transparent housings for portable VHF, stereos, cameras, charts and survival equipment.



Easy to operate, even at a depth of 100'. The EWA Master can be used with any 35 mm SLR camera, with a variety of accessories.



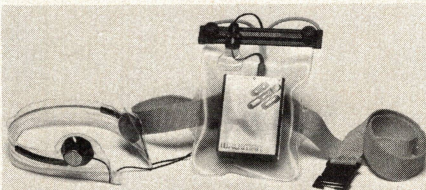
ewa survival pouches

Tough, transparent, in 6 sizes, for protecting valuables, charts, navigation computer, firearms, ammunition and flares. Guaranteed to be 100% airtight.



ewa watersound for portable VHF radios

Protects portable VHF radios in any weather. Send and receive messages right through the flexible housing. With built-in finger tip control. Guaranteed Water-proof.



ewa watersound for portable stereos

Listen to the magic mixture of music and motion while surfing, skiing or sailing. Fits most portable stereos.

PIONEER & COMPANY
216 Haddon Ave., Westmont, NJ 08108

1-800-257-7742

(In NJ and outside US: 609-854-2424)

is the best signal for a diver down because the colors are easily seen; the public has had 25 years of exposure to it; and it's easier to educate the public of its purpose because it remains dissimilar to other signal flags. I would like to share these concerns with the Rules of the Road Advisory Council." ❧

NAUI PIC FINANCING

The National Association of Underwater Instructors College is offering 24 month financing for Professional Instructor Course (ten week) students. For more information contact NAUI College, 2400 West Coast Highway, Suite M, Newport Beach, CA 92663. ❧

WRECK FACTS

(Continued from Page 8)

mond, Broward County Historical Commission, 100-B, South New River Dr. East, Ft. Lauderdale, FL 33301.

Larry Anders, Valdosta, GA, wrote just before he shipped out to Ramstein Air Force Base, Germany and asked for information on wrecks along the German and French coasts. He already plans to visit the German Maritime Museum I wrote about in an earlier Wreck Facts column, but wants some more leads. Larry, your four years in Germany sound exciting. First, check to see if there is a dive club on your base. Next, contact Andre Foulon, editor of Tauchen, the German dive magazine: Jahr-Verlag KG, Burchardstrabe 14, Postfach 10 33 46, 2000 Hamburg 1, Germany. When you visit the German Maritime Museum, ask for Arnold Kludas. He is a cordial guy and will help you with your research. When you get some extra time, visit the Orkney Islands, Scapa Flow, Scotland and dive the battleships, light cruisers and destroyers sunk in that area. Good luck and let us hear from you.

U-boat enthusiasts might want to order two inexpensive paperback books: *U.S. Subs in Action*, number 4002, *U-Boats in Action*, number 4001, available from Squadron Signal Publications, 1115 Crowley Dr., Carrollton, TX 75006. The actual photos of the subs, both German and American, are excellent and accompanied by descriptive text.

Jim Jenney, P.O. Box 144, Saunderstown, RI 02874, has a limited supply of his book: *In Search of Shipwrecks*, \$15.95. Presented in three parts, the book leads the wreck investigator through the first step of basic research and onto the final recovery, restoration and display of historical artifacts. The third part includes a dozen shipwrecks, many never discovered, in Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut and New York.

For shipwreck information, write to Ellsworth Boyd, Rt. 2, Box 408, 1120 Bernoudy Rd., White Hall, MD 21161. Please enclose a stamped, self-addressed envelope for a prompt reply. ❧

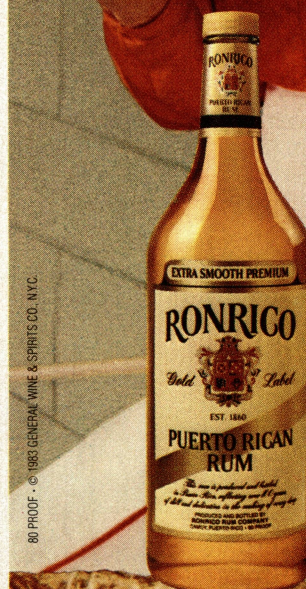
Break tradition. Drink Ronrico Gold Rum instead.



RONRICO GOLD RUM & ORANGE JUICE

2 ozs. of Ronrico Gold Rum in a highball glass; ice cubes; fill with orange juice, add a slice of orange.

80 PROOF • © 1983 GENERAL WINE & SPIRITS CO. N.Y.C.



RONRICO GOLD RUM

Since the 1950s, when spearfishing was a central focus of the sport dive, there has been a shift in popular emphasis to hunting with an underwater camera. Most recently, Pacific Northwest divers have enjoyed a bold trend toward unarmed encounters with giants of the North Pacific deep—divers peacefully observing dens of wolf eels and giant Pacific octopus, swimming with killer whales, and now, diving down to see deepwater sixgill sharks.

The alluring aspect of such a dive is that the sixgill is a real shark's shark, not just a puny dogfish and definitely not a common item. Sixgills are big and they have only been sighted with predictability at two localities: one on the protected east coast of Vancouver Island, Canada and one on Vancouver Island's west coast, near the open Pacific Ocean. In addition, sightings have been in relatively deep water for most sport divers, at depths over 25 meters (82 feet); the sixgills go much deeper as a rule. No other large sharks are ever seen by divers in this part of the world, so perhaps the latest and most exclusive achievement for the accomplished diver in Washington or British Columbia is to become one of the few to sight a sixgill.

The sixgill shark is one of the most primitive living members of an altogether ancient group of cartilaginous fishes, the sharks. All sharks inspire awe, sharing a "heritage of unsurpassed perfection in their evolutionary design as predators. All sharks swim with the sinister, broad grace which is forced upon them by the fixed attachment of their fins, in contrast to the "modern," agile-jointed, bony fishes. The sharks also have an abrasive, denticle-covered or "toothed" skin, and the majority of living species have five pairs of gill slits in the throat region; whereas the sixgill has six.

The sixgill shark is further distinguished from most other living shark species by having only one dorsal fin along the back, instead of the usual two. This single dorsal fin is far back toward the tail and the upper lobe of the tail fin is elongate.

Sixgill sharks in captivity swim constantly, albeit sluggishly. Aquarium specimens have usually included small, immature individuals which appeared docile. In the summer of 1975, however, the Vancouver Public Aquarium briefly exhibited three sixgills, each about three meters long. The largest of these three sharks was fatally attacked by one of the others.

Maturity in sixgills occurs at around two meters in length. They are known from biologist's examinations to bear nearly 100 live young, a prolific number of offspring compared to other sharks, but very few in comparison with egg laying bony fishes. Sixgills have been recorded at eight meters, probably over a half ton in weight. The size record sixgill

for San Francisco Bay was 3.35 meters and 210 kilograms (11 feet, 462 pounds).

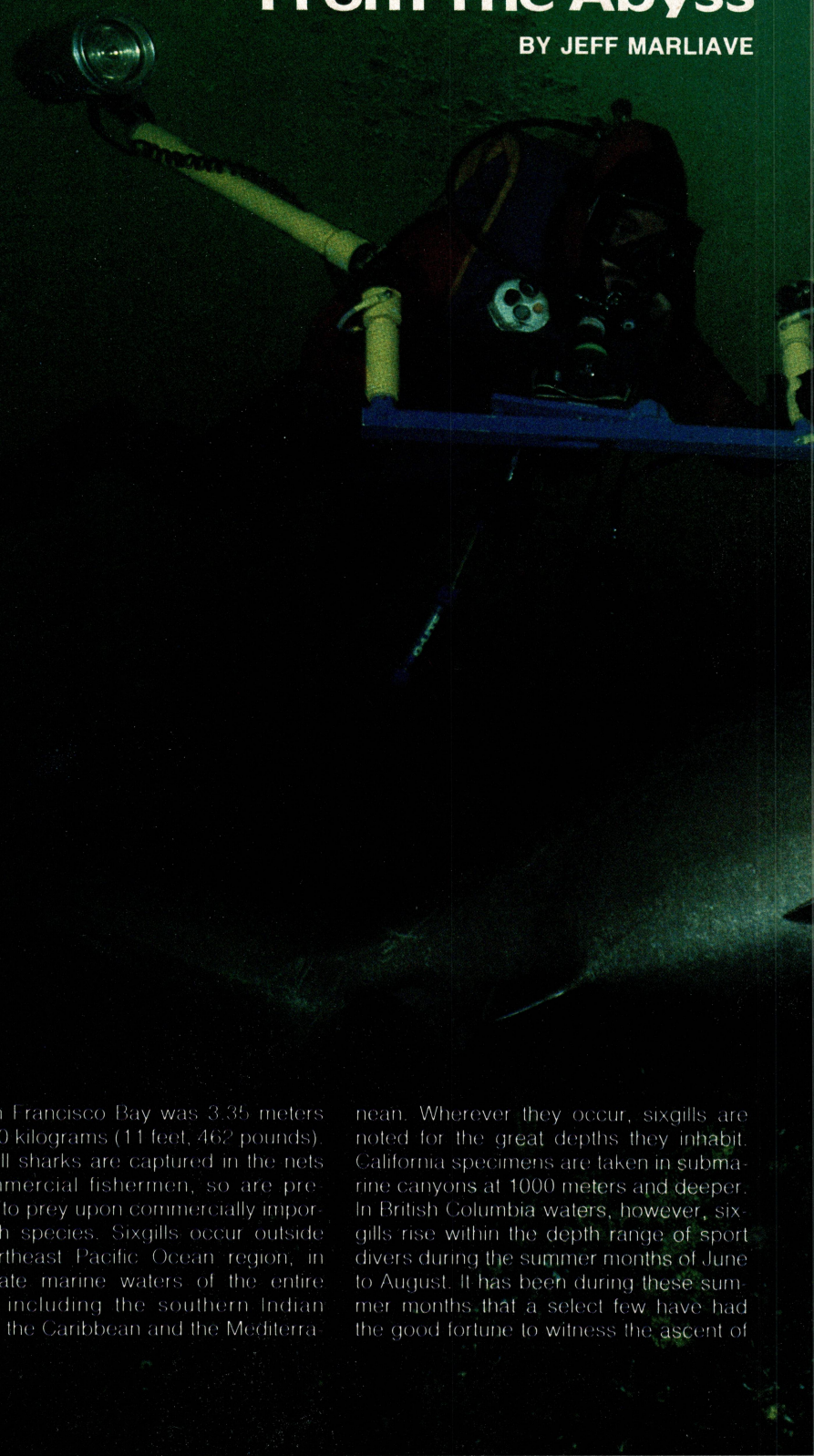
Sixgill sharks are captured in the nets of commercial fishermen, so are presumed to prey upon commercially important fish species. Sixgills occur outside the northeast Pacific Ocean region, in temperate marine waters of the entire world, including the southern Indian Ocean, the Caribbean and the Mediterra-

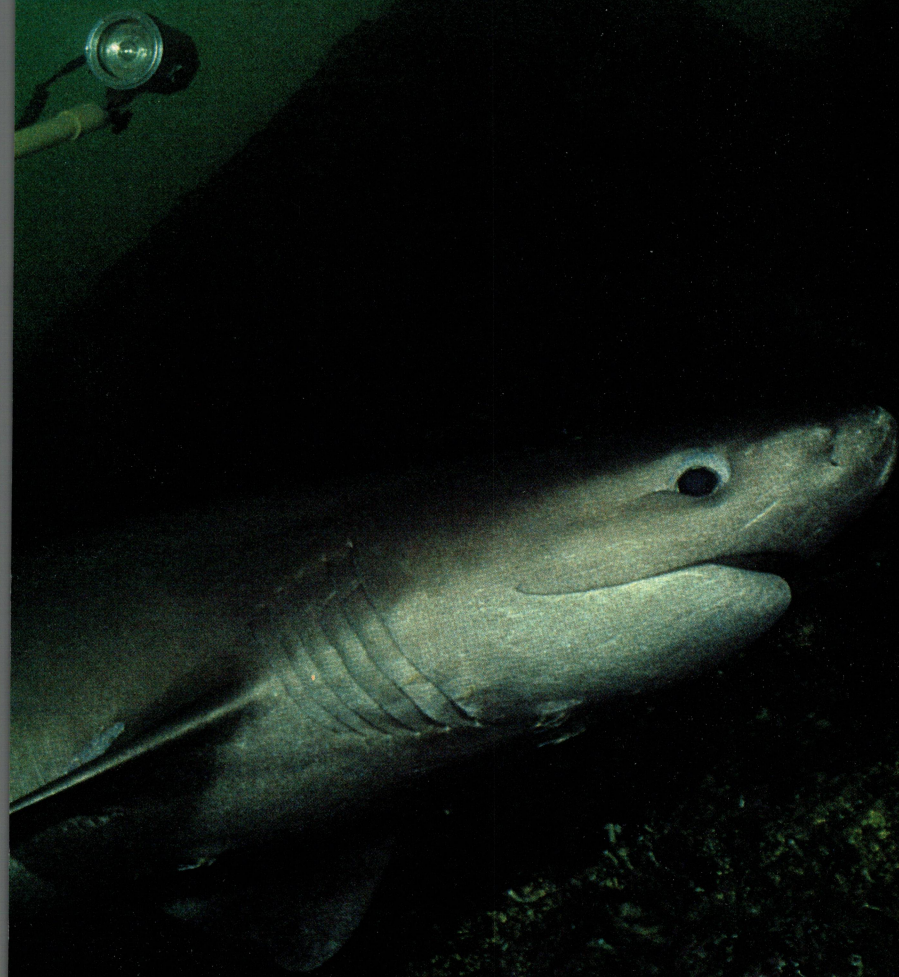
nean. Wherever they occur, sixgills are noted for the great depths they inhabit. California specimens are taken in submarine canyons at 1000 meters and deeper. In British Columbia waters, however, sixgills rise within the depth range of sport divers during the summer months of June to August. It has been during these summer months that a select few have had the good fortune to witness the ascent of

six gill SHARK

A Primeval Visitor From The Abyss

BY JEFF MARLIAVE





photo/Rick Brock

these creatures from the ocean depths.

Guided dive trips have regularly succeeded in encountering sixgill sharks at 25 to 70 meters deep off Hornby Island in the northern Strait of Georgia, east of Vancouver Island, and at the mouth of Alberni Inlet in Barkley Sound, on the west coast of Vancouver Island. Both sites are removed from the surge of open ocean waters. Both sites have deep tidal cur-

rents and lie in the path of major salmon migrations. They may have regular upwelling of colder, deep water. Many other areas share these characteristics, though, so very likely there are other potential areas to see sixgill sharks.

Nothing is understood of the biological reasons for these sharks venturing into relatively shallow water in summertime. Specimens have been caught on long

lines at the shallowest depths of under 30 meters on dark, moonless nights in the Strait of Georgia, illustrating a tendency of various sharks, including the common dogfish, to migrate up shallower on dark nights.

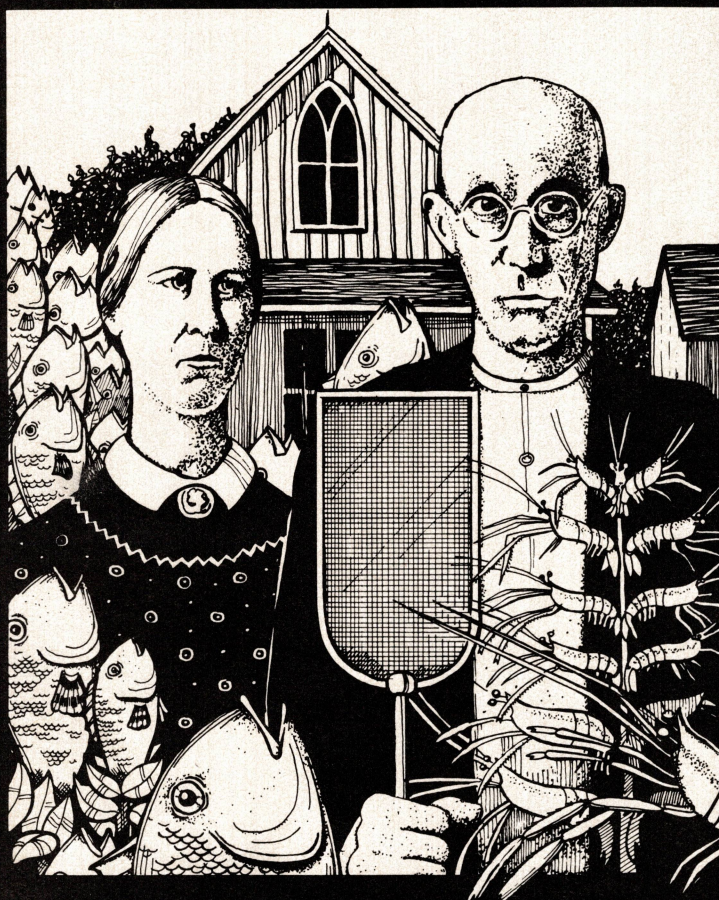
Rick Brock, an Everett, WA photographer, saw sixgills on a reconnaissance trip to Barkley Sound, then he returned for the explicit purpose of photographing one. The big, 100 kilogram beast that allowed itself to be photographed at close range was slowly cruising around the 30 meter depth range. It appeared so placid that Rick felt the urge to reach out and give it a gentle pat on the side. The brute immediately arched its back and wheeled around to face Rick, a bit more reaction than had been hoped for.

Other close encounters indicate a need for caution in dealing with sixgills. In the early 1970s, prominent Vancouver businessman Bruce Howe discovered the sixgills off Hornby Island and had a closer encounter than he had ever intended. He accidentally bumped into the side of a large sixgill's head and only realized what it was when he saw its eye in front of his facemask. The four meter shark compounded Howe's surprise by swimming in a tight arc and returning toward him with its enormous mouth agape. Bruce Howe pressed his back against the side of the reef and shot for the surface as fast as he could swim, but saw no evidence that the sixgill followed. This escape occurred at under 25 meters, so maybe that sixgill was pushing its upper depth limit, or maybe it was just returning a threat signal to the intrusive diver.

Another incident suggests the sixgill will not attack without real provocation, but it will not ignore taunts. This incident also took place at Hornby Island, just recently. Two Alberta divers were on a guided sixgill dive and they tried to grab hold of a shark to hitch a ride. The shark thrashed free of the first diver's grip and went around in a broad circle before returning to the area of the divers. Rather than respect the first reaction of the sixgill, these divers foolishly risked a second try. The response from the shark was again to wrest itself free, but then to swim down out of the depth range of the divers. In two successive days of searching after that, no more sixgills were sighted.

Whether as the result of newly emerged understanding of marine wildlife, or because of jaded disregard born of familiarity with dive technology and the need for fad, divers are now accepting new risks for the thrill of encountering creatures from atop the pyramid of marine life. With real understanding and respect, these exciting forays, ventures into the realm of man's rivals in power and nerve, can add new dimensions to the scuba diver's special appreciation of the marine world. >>>

aquaculture



\ak-wə•,kul-cher\ noun [Latin aqua + English culture] 1: the farming and husbandry of freshwater and marine organisms. 2: a new undergraduate program developed by Florida Institute of Technology.

Ten thousand years ago, the shift from hunting and gathering began. The farmer and the herdsman gradually replaced the hunter; the plow gradually replaced the bow and arrow and the spear. This evolution has continued as man applied his engineering and scientific skills to the domestication and production of land plants and animals.

A similar transition has yet to take place in the oceans. Man still goes to sea as a hunter; his tools: the net, the harpoon and the trap. This situation is changing. Overfishing, pollution and an increased demand for protein are bringing about rapid developments in the field of aquaculture.

At F.I.T. we take an active role in this exciting new field.

For more information about aquaculture and our 40 other undergraduate and graduate degree programs, send in the coupon below.

F.I.T. admits students of any race, color, or national or ethnic origin and does not discriminate on the basis of handicap in admissions or access to its programs.

SD090284

Florida Institute of Technology

Jensen Beach Campus, Office of Admissions

1707 N.E. Indian River Drive • Jensen Beach, Florida 33457 • (305) 334-4200

Call Toll Free (800) 241-7826, in Florida (800) 433-0116

Name _____

Address _____

City _____ State _____ Zip _____

Phone(____) _____ Age _____ H.S. Grad. Date _____

S.37

(Continued from Page 29)

in the soft sand.

Once again on our boat we talked about the interesting things we had seen and examined some worm-eaten teak decking that had been brought up. This was later crafted into a beautiful frame for a photo of the old S.37.

On the second dive I became a bit more adventurous and curious about the open conning tower hatch, where the "strong seasurges" lurked. Admittedly, it was a small opening and it was quite forbidding, being very dark and having loose cables hanging about. But I was not "sucked inside" knowingly or unknowingly! After a few minutes of examination, I decided the surge on the outside, being in shallow water with the waves rolling overhead, was probably worse than anything I would encounter on the inside.

The hatch was barely large enough to accommodate a set of twin 72s. Once inside, the previously gloomy interior was actually quite pleasant. There was some light coming in from the open hatch above, and with the aid of my light I began to examine the interior surroundings.

A ladder ran from the hatch above to the floor of the conning tower beneath me, and directly below my fins was another open hatch which led to the dark control room. I noticed two places where the light blue of the ocean outside could be seen. They turned out not to be corroded holes in the steel as I first thought, but items unique to WW I submarines—conning tower portholes. Next to them, barely visible under the heavy marine growth, were two large objects side by side. Curious as to their nature I carefully cleaned the growth from the front of one, partially revealing a glass face—under which could clearly be seen the words "ahead, one third, two thirds," and a brass arrow pointing to the word "stop." They were brass submarine telegraphs.

The control room below proved also to be basically intact, though partially sanded in. Further investigation and hard work provided access to the forward torpedo room, where all four heavy bronze torpedo tube doors still remained, one of which had contained a messenger of doom for the *Natsushio* so long ago. And yes, there were lobster everywhere.

The S.37 turned out to be a great diving subject, especially when subsequent research turned up her true identity and history. Digging into the archives, we have unearthed many photos of her in war and peace. At the moment, several ex-crewmembers are being searched for, with the hope that they can share with us their memories and bring her briefly to life once again.

Herb, who did so much research on his

own, recovered one of the brass port-holes from the conning tower and donated it to the Pacific Submarine Museum in Pearl Harbor, Hawaii. Ray De Yarmin, curator of the museum, informed us that this was the first and only S-class artifact on display there; a piece of history for others to enjoy and perhaps remember.

The S.37 now rests in the environment she was made for, the sea. Torpedo rays rest under the tubes that once bore their namesakes and the humidity is now considerably worse than it was in 1942. Where cockroaches once crawled, their cousins the lobsters now hide. The sea takes all—the S.37 lies forgotten in her embrace. It is man who remembers. 🐞

EDITORIAL

(Continued from Page 4)

advertise their services on a regular basis. You can contact them by telephone or write a letter asking questions relative to your trip.

There is a pretty good chance that the dive travel agent can give you fast and accurate answers. They travel constantly and personally check out hotel accommodations; dive equipment; dive boats; and underwater attractions. They have the most up-to-date information available because they are in constant touch with the dive resort operators.

Do not be afraid to deal with a dive travel agent — it will not cost you one penny more than if you were to book the same travel arrangements on a direct basis. Travel agents make their money on commissions received from airlines and hotels — not from you. In fact, a good dive travel agent can probably save you money as he/she knows all of the best travel combinations for the lowest priced air fares and hotel packages. Because travel agents deal in volume they often can obtain a better price than the individual traveler. They can also get you airline reservations which would be impossible otherwise, since they reserve in advance.

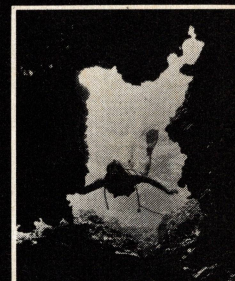
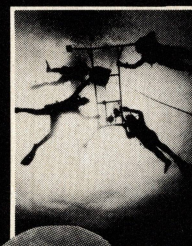
While there is no guarantee of a perfect dive vacation, the above suggestions can help you turn the odds in your favor. The important thing is to know exactly where you are going and what to expect. Carefully researching your next travel vacation can help you avoid any surprises or disappointments. Have a good trip! 🐞

FIT A.S. DEGREE

Florida Institute of Technology recently introduced its Associate of Science degree in Sport Diving Operations. The program is the only one of its kind in the United States.

Drew Richardson, head of the Sport Diving Operations program at FIT, said, "Graduates from the program are working as diving retailers, sales personnel, business managers, divemasters, instructors and charter boat operators in Florida and the Caribbean." 🐞

We teach the BUSINESS of sport diving



Ever think about turning your hobby into a career? Want to become a divemaster? Owner of a resort dive shop, or a string of them? A charter boat operator? Or dozens of other sport diving careers you might not even know about right now?

Dive into your dreams at Florida Institute of Technology. Our new Associate of Science degree in Sport Diving Operations will give you the skills and knowledge you need to make them come true.

This is an accredited college program, open to basic divers who will graduate in two years with instructor certification, plus a lot more under their weight belts: boat handling skills, compressor maintenance, dive accident management, equipment repair, seamanship, marketing and retailing techniques... In short, everything you need to know to be successful in the sport diving business.

Our exciting new program is all this and more. F.I.T. admits students of any race, color, or national or ethnic origin and does not discriminate on the basis of handicap in admissions or access to its programs.

SD090184

Florida Institute of Technology

Jensen Beach Campus, Office of Admissions

1707 N.E. Indian River Drive • Jensen Beach, Florida 33457 • (305) 334-4200

Call Toll Free (800) 241-7826, in Florida (800) 433-0116

Name _____

Address _____

City _____ State _____ Zip _____

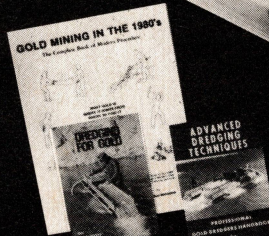
Phone(_____) _____ Age _____ H.S. Grad. Date _____

GOLD! TREASURE!

Make your hobby pay off. From panning to dredging to metal detection, gold is a thrill to find. Let us show you how to mix profit with your diving fun. Send for our free catalog.



5" Surface Dredge
Model 5538



3 GREAT BOOKS
Making your mining more productive — "Dredging for Gold" for beginners. "Advanced Dredging Techniques" — for the experienced.

FREE CATALOG

A gold mine of sluices, pumps, dredges, tools, diving equipment, books and detectors. Send for your FREE copy.

KEENE ENGINEERING, INC.

9330 Corbin Ave., Northridge, CA 91324 • (818) 993-0411

☐ Please send FREE CATALOG

☐ "Dredging For Gold." \$7.95 (CA residents add 52¢ tax)

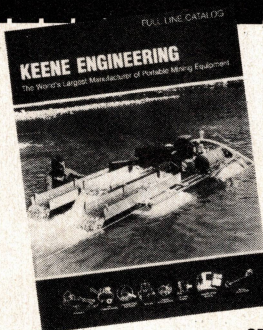
☐ "Advanced Dredging Techniques." \$7.95 (CA residents add 52¢ tax)

☐ "Gold Mining in the 1980's." \$15.95 (CA residents add \$1.04 tax)

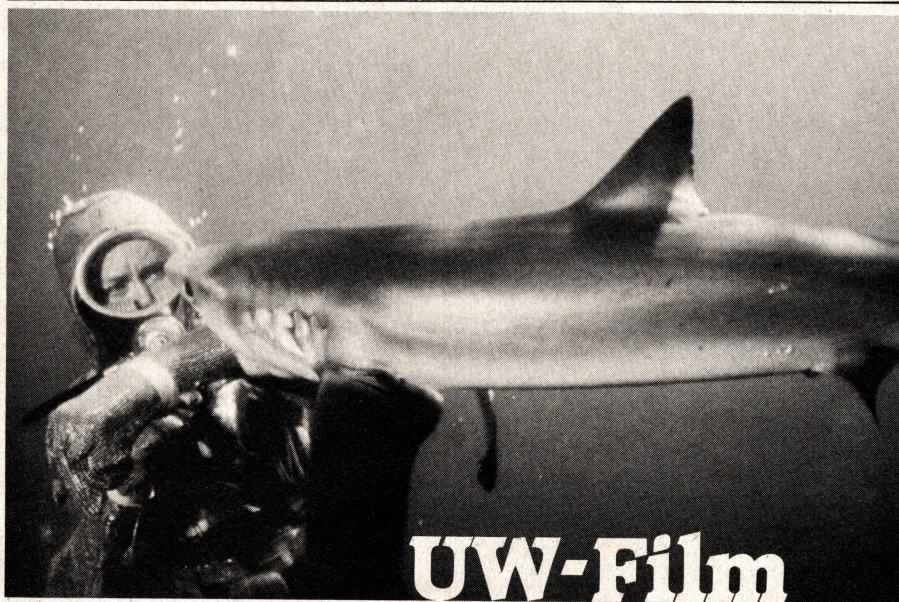
Print Name _____

Address _____

City _____ State _____ Zip _____



SD



Valerie Taylor

Internationales
Unterwasser-Film-Festival
13. + 14. Oktober 1984, Kongresshaus Luzern
Schweiz/Suisse/Switzerland

UW-Film Festival Luzern

	12. Oktober	13. Oktober	14. Oktober
Film-Festival 84	19.00–22.00	9.30–11.30	10.30–12.00
Postfach 196	(Soirée mit	14.00–16.00	14.30–17.00
CH-8029	freiem Eintritt)	16.30–18.30	
Zürich	20.30–22.00		

Sponsored by
Eastman Kodak Company,
Rochester and
Kodak SA, Lausanne

Patronat Documenta Maritima

Diver's Calendar

Through October 31 PADI's Sixth Annual Underwater Photo Search/Competition. (Contact: your local participating PADI Training Facility)

September 1-2 Fifth Annual Underwater Treasure Hunt to benefit Trooper Island Boys Camp on Dale Hollow Lake, Clinton County, KY. Prizes, camping, barbecue and night dive. (Contact: Gregory and Associates, Inc., River Divers, P.O. Box 251, Lewisport, KY 42351)

September 7-8 The 20th Annual Underwater Film Festival sponsored by the San Diego Underwater Photographic Society at the Civic Theater, San Diego, CA. (Contact: UPS, P.O. Box 82782, San Diego, CA 92138 or call Dee Miller at (619) 287-4155)

September 7-10 The Eighth National YMCA Underwater Activities Convention will be held at the Casa Marina Marriott, Key West, FL. (Contact: National YMCA Center for Underwater Activities, P.O. Box 1547, Key West, FL 33041)

September 8-9 First Annual Underwater Fun Festival sponsored by the Klamath County Dive Rescue Team. Contests, night dive, chili feed. (Contact: Klamath County Dive Rescue, c/o Sheriff's Department, Court House, Klamath Falls, Oregon 97601)

September 9 Fifth Annual Divers Swap Meet, sponsored by the Santa Ana College Dive Club at the college pool. Everyone welcome, no fees. (Contact: Jim Taylor, 22011-J Rimbhurst Dr., El Toro, California 92630)

September 9 Marine Archaeology and Salvage Law course, Washington, D.C. Sponsored by the Marine Technology Society. (Contact: Dr. Harold Palmer, (202) 462-7557)

September 9-14 Marine and Diving Medicine: includes diving workshops, marine biology labs, ear and eye in diving. Appledore Island, Isles of Shoals, Main. Co-sponsored by Colby College and the Undersea Medical Society. (Contact: R.H. Kany, Director of Special Programs, Colby College, Waterville, Maine 04901)

September 15 Lima Scubans, Inc. Annual Steak Dinner at Long Lake, Lima, Ohio. Deadline for tickets is September 8. (Contact: Cindy Cummings, 4062 Statesman Pkwy., Lima, Ohio 45806; (419) 999-6154)

September 17-21 Second Annual Underwater Management Course, hosted by the Police Department in Lakewood, NJ. (Contact: James T. Carney, c/o Lakewood Police Underwater Recovery Team, 231 Third St., Lakewood, NJ 08701; or call him at (201) 363-0200)

IKELITES

MINI C-LITES

Turn on a new "HALOGEN BULB" MINI C-LITE for intensity that will absolutely amaze you. We refer to this new bulb and precision reflector combination as our "Krypton Killer" compared to other small lights. Measuring 6" long and 3" diameter, the MINI C-LITE operates on four "C" cell alkaline or rechargeable batteries producing a lighting intensity for night, wreck, or cave diving. The rotating on/off switch offers easy one hand operation.

IKELITE II

The IKELITE II provides the advantages of lifetime reflector brilliance and greater intensity of a sealed beam lamp in a lantern battery powered light. It features a unique on/off switch and switch lock in a design with almost nothing to wear-out or fail. The standard six volt lantern battery provides approximately six hours of continuous light.

IKELITE II RECHARGEABLE

The IKELITE II RECHARGEABLE offers the same features as the standard IKELITE II plus utilizes a gel-cel battery and special halogen lamp, producing four times the intensity of lantern battery lights.

C-LITE I

The unique shape of the C-LITE I allows it to become an extension of your arm. It handles well and can be slipped under your belt or into the optional holster. The C-LITE I utilizes six "C" cell alkaline batteries, providing five hours of light with twice the intensity of faceted reflector/bulb combinations.

C-LITE II

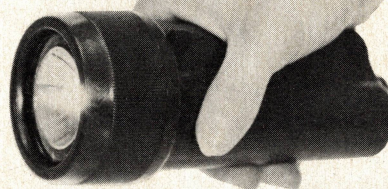
The C-LITE II is the lightest rechargeable light in its class and one of the brightest in the diving industry. The ni-cad batteries and halogen bulb provide 1.5 hours per charge with five times the intensity of the C-LITE I.

MODULAR X

The MODULAR X LITE is the ultimate for intensity and versatility in a non-rechargeable light. It utilizes six "D" cell alkaline batteries to produce six hours of light at an intensity almost equal to rechargeable lights in the \$100 price range. This Lite can easily be converted to the SUPER-LITE.

SUPER-LITE

Unquestionably the worlds brightest diving light. The SUPER-LITE comes with a removable ni-cad battery module and dual-filament lamp. The ni-cad module will provide about one hour of extreme high intensity light with the spot beam or two hours of lower intensity with the wide angle flood beam. Ni-cad battery module can be recharged in only three hours.



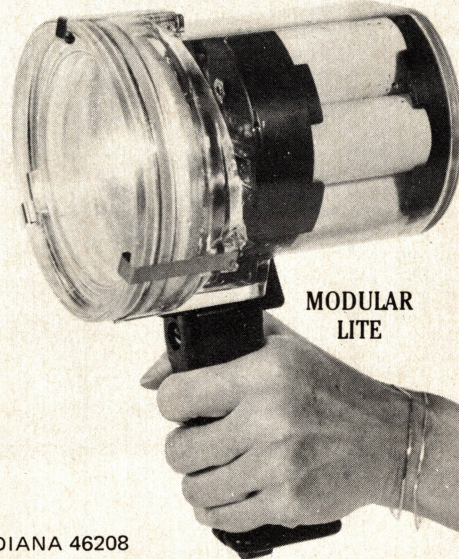
MINI C-LITE



IKELITE II



C-LITE



MODULAR
LITE


ikelite

UNDERWATER SYSTEMS

50 WEST 33RD STREET

SEND \$1 FOR CATALOG

P.O. BOX 88100

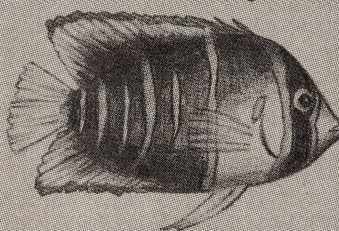
INDIANAPOLIS, INDIANA 46208

The Blue Angelfish

(*Holacanthus isabelita*)

The angelfishes are among the most beautiful inhabitants of any tropical reef. Their bright colors, expressed in imaginative patterns over their flat, pancake-thin bodies, are whimsical works of natural art. It is hard to imagine a reef community without them, for they are spectacular and familiar highlights to the underwater seascape. In undersea parks where divers feed fishes, they are among the most inquisitive and can be the first to accept handouts, swimming up boldly to take bits of sea urchin or fish. All of them are an underwater photographer's dream. □ The blue angelfish is a resident of Caribbean reefs, found from Bermuda, southern Florida, the Gulf of Mexico and the Bahamas. It is a close look-alike of the queen angelfish (*H. ciliaris*). They are distinguished from each other by the fact that the queen angelfish has the characteristic crown-dotted black spot on the forehead ringed in bright blue. The blue angelfish has been called a "subdued" version of the queen angelfish, for this reason. □ The scales of the blue angelfish are yellowish brown to purplish brown with pale edges, while the forehead and chest are bright blue. The pectoral fin is blue, rimmed in yellow, as are the dorsal, anal, ventral and caudal fins. The large spine at the edge of the gill cover, a physical characteristic of angelfishes, is blue in this species, as are the smaller spines along the gill flap above it. □ The scientific name of the blue angelfish, *H. isabelita*, is explained by ichthyologist John Randall as the correct name for the species, the descriptions of *H. bermudensis* and *H. townsendi* being based on hybrid specimens between the queen and blue angelfishes. □ The blue angelfish is one of the larger angelfishes, growing to a length of 18 inches. The related French, gray and queen

angelfishes reach lengths of 16-17 inches. The juveniles of all these species look very different from the adults—usually dark in color and bearing a series of bold, vertical bars. The juvenile French and gray angelfishes are black with yellow bars, whereas the juvenile blue and queen angelfishes are dark posteriorly, yellow anteriorly, with brilliant blue bars. The juveniles of both species have bright yellow tails. □ The chief distinguishing characteristic between the juvenile blue and queen angelfishes is the second vertical bar: That of the blue angelfish is straight and that of the juvenile queen angelfish is curved. □ Angelfishes belong to the family Pomacanthidae, which was



juvenile

at one time included with the butterflyfish family, Chaetodontidae. The major feature they share is their tooth structure. Chaetodont means bristle tooth, and refers to the minute, brush-like teeth of both. Angelfishes eat sponges for the most part, but also algae, tunicates and zoantharians such as anemones and corals. They are diurnal, spreading over the reefs to feed by day and entering a sleepy state, or torpor, by night, at which time they often exhibit color changes. □ Another chief difference between the angelfishes and butterflyfishes is that angelfishes have a preopercular spine, a vertiable spike that extends from the gill cover, while the butterflyfishes do not. A close look at the cheek area of any of the angelfishes reveals this spine (it is concealed by the upturned pectoral fin of our pictured specimen). □ Angelfishes are more solitary than butterflyfishes and when they swim, they glide. They are more wary than butterflyfishes, but when they can be enticed to eat out of the diver's hand, they will become quite fearless, confident and very trusting. 🐠

Photo By Stephen Frink - Text By Hillary Hauser

Frink shot the photo in 30 feet of water on Molasses Reef in Pennekamp Park, FL. He used a Nikonos III with 28 mm lens, Subsea Mark 225 strobe. Ektachrome 64 at f16, 1/60 second, two feet from subject.



DIVER'S INSTITUTE^{OF} TECHNOLOGY

THE REAL THING

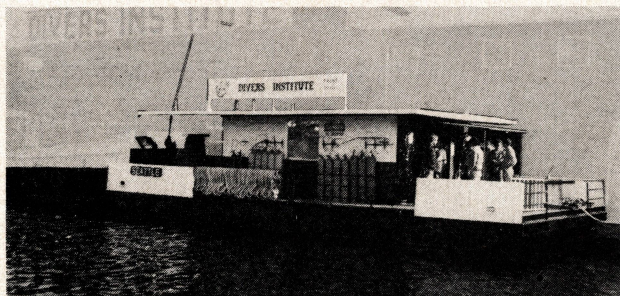
- OPEN WATER DIVES TO 200 FEET
- PROFESSIONAL DEEP SEA DIVER INSTRUCTION
- STATE OF THE ART TRAINING EQUIPMENT

*Why Let a School Train You in Tanks and Swimming Pools When
DIT Guarantees Training in the Natural Work Environment!*

NOW IN OUR
17
th
YEAR



At DIT's training site the water is cold & murky with poor visibility: the working industry's natural environment. The real thing!



The culmination of DIT's training is 200 ft. dives from their new deep dive barge, which no other school offers. The real thing!



DIT students have access to an unlimited supply of highly sophisticated equipment. The real thing!

Judge For Yourself Whose Best Qualified To Train You Right!

COMPARE THE REST • CHOOSE THE BEST

DIVERS INSTITUTE OF TECHNOLOGY

OSHA SAFETY OFFICERS THROUGHOUT THE NATION HAVE BEEN TRAINED BY D.I.T.

***Accredited by Accrediting Commission of the
National Association of Trade and Technical Schools***

MEMBER OF:

National Assn. of Trade and Technical Schools (NATTS)
Assn. of Commercial Diver Education (ACDE)
Assn. of Diving Contractors (ADC)
Undersea Medical Society (UMS)
Institute of Diving (IOD)
Wash. Assn. of Trade and Technical Schools (WATTS)
Better Business Bureau (BBB)

APPROVED BY:

Dept. of Education as an eligible institution for the Guaranteed Student Loan, National Direct Student Loan, PELL Grant and Supplemental Educational Opportunity Programs.
Washington State Commission for Vocational Education for Veterans Training.

4601 SHILSHOLE AVE. N.W. • SDM-9
P.O. BOX 70312 • SEATTLE, WA. 98107
(206) 783-5542
**SEND FOR FREE
REGISTRATION PACKAGE**

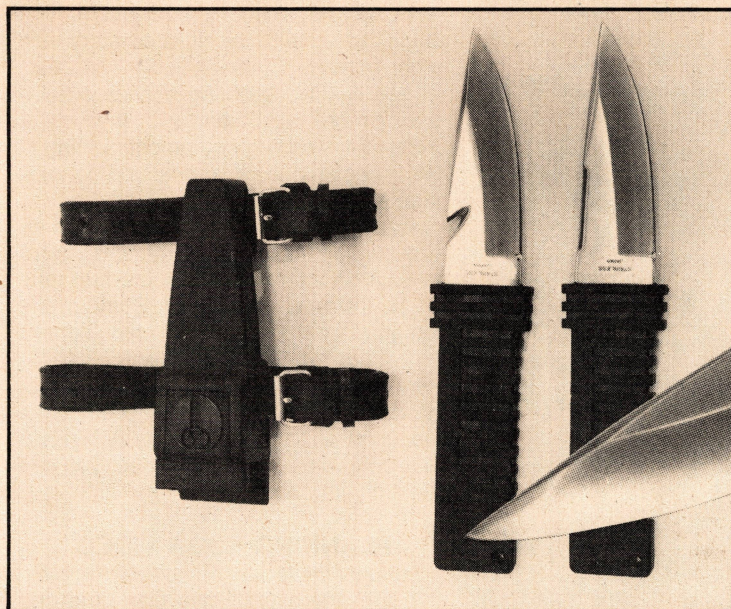
NAME

ADDRESS

CITY

ST.

ZIP



U.S. DIVERS PRO KNIVES III & IV

Two Tough Task Masters

TEXT AND PHOTOGRAPHY BY MARTY SNYDERMAN

Gather a group of divers on a boat anywhere in the world and ask them why they own a dive knife. Odds are you'll get at least a half dozen different answers. Someone in the bunch is sure to say you need a knife to cut monofilament line should you become entangled. A diver from Southern California will attest to the necessity of having a knife to clear kelp from the swim step or prop of a dive boat, while yet another insists the best use for a knife is to fillet fish. Varied as they are, all are valid responses.

You do not exactly have to be the next Albert Einstein to realize divers who enjoy a variety of activities utilize their knives for a multitude of reasons. I can't think of another piece of diving gear that is used for so many different purposes. We are constantly asking our knives to do it all.

Realistically, one knife cannot be expected to do everything as well as a variety of knives, each designed for a specific function. That fact presents a dilemma for both the manufacturers of dive knives and for consumers who must make the ultimate decision of which knife to purchase. Obviously, there is a need in the marketplace for a knife that will do a good job while performing a wide variety of tasks. U.S. Divers has recently introduced the Pro Knife III and Pro Knife IV to their complete line of JM Cousteau knives. According to Mark Falconer, the director of industrial design at U.S. Divers Headquarters in Santa Ana, California, "The Pro Knife III and the Pro Knife IV were specifically built to be task oriented. They are intended to take the demands of prying, sawing, hacking and cutting. These knives are not as fine a piece of

cutlery as are the Pro Knife I and II, but they will do a good job at any task a diver can reasonably expect a knife to do, including cutting and filleting."

Both the Pro Knife III and the Pro Knife IV can be described as thin, straight handled knives featuring bowie-style blades. The overall length of each is just under 9½ inches. Blade length is 4½ inches, and each knife comes complete with a sheath and two straps. The only major difference between the two models is that the blade of the Pro Knife III contains an integral line cutter, a notch along one edge of the blade which makes cutting line a very easy thing to do. On the IV, the line cutter has been replaced with a one and three-eighths inch long serrated edge which will assist in sawing action.

A number of design features utilized in both models makes it readily apparent that the staff at U.S. Divers did their homework when conceiving and building these knives. The handles on both models are made from an injection molded thermoplastic elastomer. In effect, that means the blade and the handle are not two separate pieces which have been glued together and that can come apart with age and wear. Instead the blade and handle have been molded together into one piece, greatly increasing durability. The knife handle is corrugated or ribbed to provide a better gripping surface.

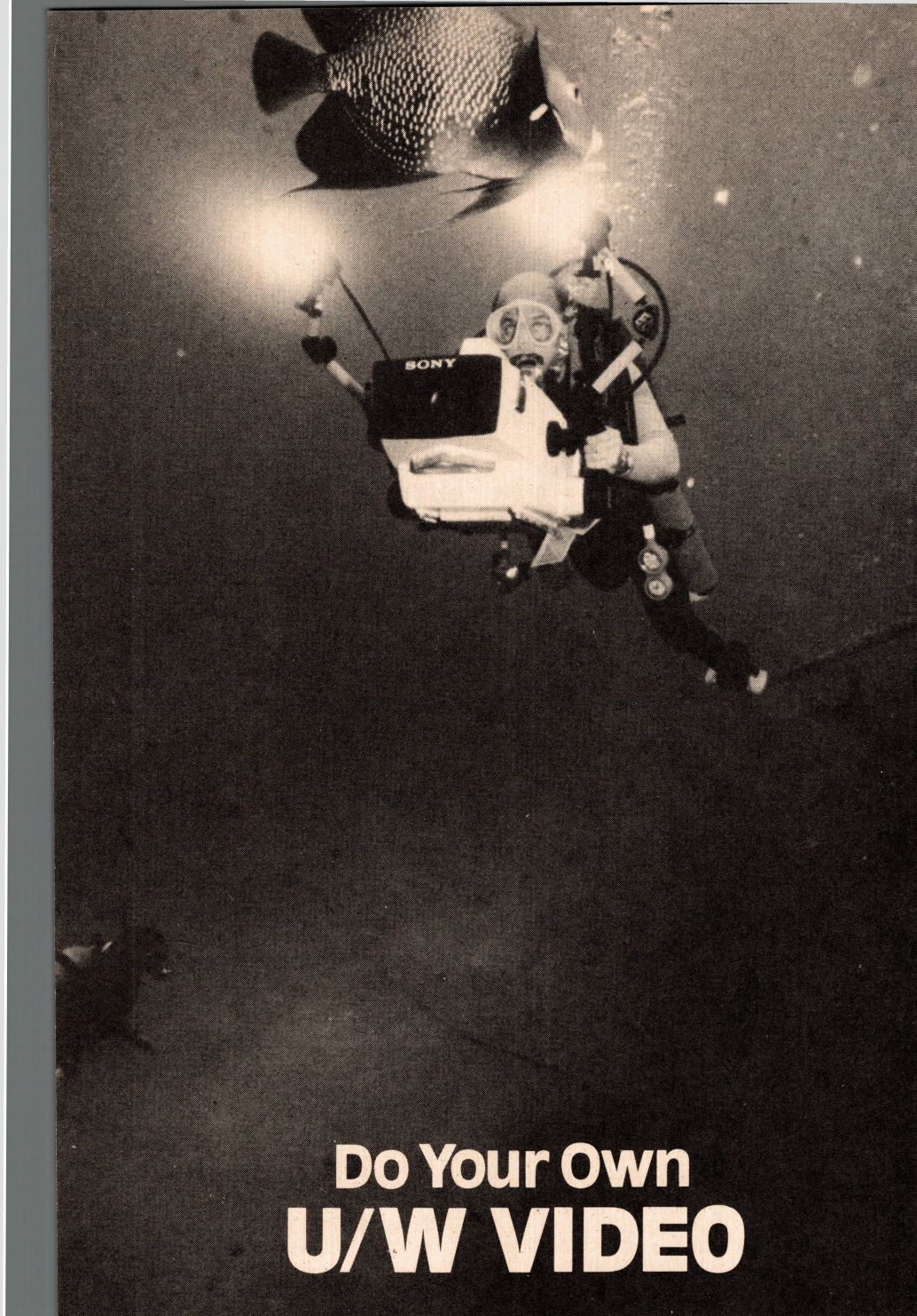
The sheath incorporates a spring loaded quick release feature making knife removal and replacement very easy. All you need do to remove the knife is press in on the release button and lift up on the knife. To replace the knife, all that is required is lining up the blade and the

sheath. When you push the knife into place, a notch on the knife handle meshes with the release locking mechanism. The locking mechanism has proven to be extremely reliable and there is no fumbling with rubber straps.

The blades of the Pro Knife III and IV are made of series 300 stainless steel. These are much less brittle than those made of series 440. If the blade is intended for a variety of purposes, as is the case with the Pro Knife III and IV, it is less likely to break if it is built from series 300 stainless. Also, series 300 stainless provides more resistance to corrosion than does series 440. To briefly summarize, if a razor sharp edge is important to you, you will have to sharpen the blades of the III or IV more often, but you can expect better overall performance.

At the top of the handle you will find a small hole that can be used for attaching a safety lanyard and along the bottom of the sheath you'll discover a small drain hole. The sheath comes with two rubber straps, one 22½ inches long, the other 19½ inches in length. Both the Pro Knife III and Pro Knife IV are designed to be worn on your legs. There are plenty of pre-cut holes in the straps making size adjustments easy. Stainless steel strap buckles add longevity.

If you are looking for a dive knife that will serve you well in a variety of underwater and topside tasks, you'll be doing yourself a favor to consider the Pro Knife III (catalogue #4305-00) and Pro Knife IV (#4310-00) by U.S. Divers. Suggested retail price of each is \$50. For further information contact your authorized Aqua-Lung Pro Line dealer. ➤



Do Your Own U/W VIDEO

BY JERRY SCHNABEL

With the arrival of many new underwater video systems, perhaps you are considering or are already involved in this pursuit. Good underwater video will hold your viewers' attention and leave them wanting to see more of your work. If the video is educational in nature, your audience should have a clear understanding of the subject material presented after viewing it. Video is an effective new medium for the diver, enabling you and others to see your thoughts and feelings accurately portrayed. This article will serve to give you a foundation from which to build your own successful U/W video.

ESTABLISH YOUR GOALS

Before you jump overboard, decide upon a goal that will determine your shooting and production techniques. While shooting you must know exactly what you want to record, and get it on tape. Keep your goal within the limits of your equipment and resources; costly editing later may run you over budget. Basically, your shooting technique will fall into one of the three following categories:

Type I—Clean takes back to back on the same tape which make the finished story without editing.

Type II—Clean takes on one or different

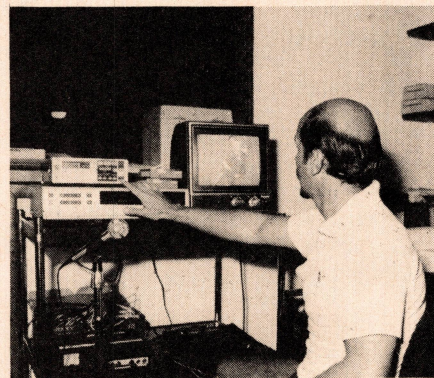
tapes which, when re-recorded onto a single tape, make the finished story with minor editing.

Type III—Overshooting each scene on one or more tapes, and with the use of professional editing equipment, adding titles, special effects and sound to produce a quality video.

Learning how to shoot Type I video effectively will make life simple and sharpen your shooting skills, as the first take will be the finished product. Some of the categories for underwater video are: entertainment, marine life studies, documentaries, training tapes, fun and comedy, dive resort applications, promotions and commercial assignments. Whatever your goal with underwater video, you can attain it with proper planning.

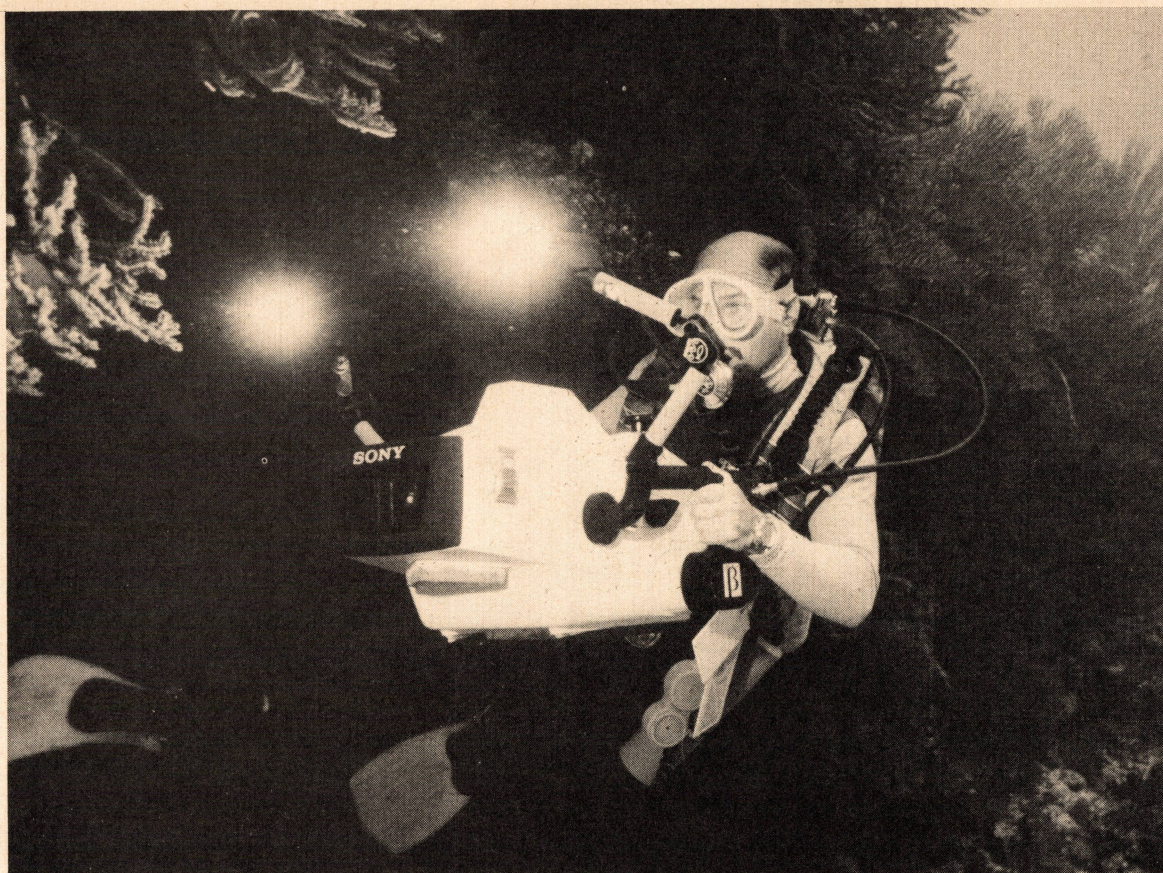
PLANNING YOUR VIDEO

Some of the factors to consider in planning are: the overall dive plan time and depth; equipment needed; support personnel; the needs of you and your client; weather and environment; scheduling retakes or additional shots. Lay out your scheme or sequence of events on paper or blackboard to direct your shooting efforts. For example, divers enter the water, descend, explore wreck, ascend.



Keep it simple and precise, covering only that which you wish to record on tape. Have an alternative dive plan prepared if you wish to allow time to film the unexpected. A storyboard layout may be helpful for you and others to visualize the entire video prior to the actual shooting. Storyboard pads are available through art supply stores or you can make your own. They are individual pages with the top half containing a sketch of a particular scene to be filmed and the lower half containing the narrative. When the storyboard sketches are lined up side by side they graphically depict each scene in your video and help you choreograph video with narrative music or voice. Should there be weak spots in the show, they will be readily apparent from the storyboard.

With a thorough layout at hand, call in all actors, actresses and support personnel for a planning meeting. Carefully explain each person's responsibilities, his/



photos/Susan Swygert

her role and what is expected of him/her. Reinforce the fact that each will be performing on camera and his/her efforts will contribute greatly to the success of the video. Establish a system of communications by hand signals, slate, etc. Review the dive plan and safety rules, answer all questions and keep morale on an upbeat swing. Let's face it, the human element will make or break your efforts. Divers underwater or above will serve to add comedy, suspense and drama to your video. Hear their ideas and input—if they are really into it you'll have success.

Make a final video equipment check prior to shooting; O-rings cleaned and seated, batteries charged, tape loaded, lights tested and ready, white balance, test record and playback controls operating properly. Satisfied your equipment is ready, it's time to relax and enjoy the fun of shooting video tape. With the planning phase behind you, the rest will fall into place easier than you think.

SHOOTING TIPS

The following general rules apply to all shooting situations.

- 1.) Hold the camera steady. Do not shake or jiggle it while shooting.
- 2.) Pan slowly—when moving the camera to follow action, use a slow, steady motion. Rapid panning will make your audience dizzy.
- 3.) Hold for a 10 count—record each take for a minimum of 10 seconds.

Shorter takes when played back will look jerky and feel uncomfortable to the eye.

4.) Stop recording when changing to the next subject or scene; i.e., your diver is just swimming out of the picture and to the extreme right your sought-after eagle ray appears—stop recording, swing the camera to the right to pick up the eagle ray, then start recording. If you pan to the ray while recording, you lose impact and present useless footage.

5.) Avoid direct shooting of bright subjects such as sunlight, nearby underwater strobes or dive lights, etc. From a distance, the effects of these lights can be interesting; at close range they will leave a temporary imprint on the image which will be carried to your next scene. Never film directly into the sun as this could damage the camera. Use of direct sunlight for silhouettes is best done at depths greater than 50 feet or from sunlight behind clouds in shallower depths.

6.) Control your buoyancy. Effective buoyancy control is important for you and your actors to prevent stirring up silt.

7.) Shallower means more color. Good colors can be recorded without lights to depths of 25-30 feet. Beyond this lights will be needed to restore color.

8.) Use proper tracking technique—swimming at the same rate as your subject while recording. Tracking can be done while alongside, under, above or behind your moving subject.

9.) Follow your storyboard or plans.

Concentrate on only that which is needed to tell your story. Record one scene then move directly on to the next until all planned takes are complete. Record unexpected material if it complements your story. Don't record 20 minutes of your buddy catching a lobster if you are shooting a Type I video on buoyancy control.

AVAILABLE LIGHT

The underwater video camera is capable of recording images at great depths without the use of lights. Your use of available light should be limited to two situations: (1) shooting at depths not greater than 30 feet, and (2) shooting upward angles from deeper depths to silhouette shapes or show divers ascending or descending. To maximize color without lights, shoot as close to your subject as possible, say within one to four feet. If swimming, stay close to the reef or bottom to pick up reflected light. If tracking, keep the subject within a four foot range. Keeping the sunlight at your back will yield more reflected light from your subject. Take advantage of contrasts between light and dark which are more interesting than a monotone of color. Avoid shooting in shadow areas, as this decreases available light and means loss of color. As available light decreases, lens aperture increases with a corresponding decrease in depth of field, meaning you will have to pay close attention to your focus control.

U/W VIDEO

ARTIFICIAL LIGHT

Artificial light brings out the color and gets the oohs and aahs you would expect from an audience viewing a queen angel-fish. Most video cameras have an auto iris which will yield the correct exposure for available light and balance this with the artificial light. Essentially you will be painting in colors with your artificial lights. Here again, keep your area of interest within your lights' range, usually three to four feet from the lens. Turn your lights on just before recording and off immediately afterward. This will conserve battery strength. Usually your recording time will outlast the burn time of your lights. You can mount two lights on ball joint arms, one on each side of the camera, to cover the wide angle lens. You will need a system with a burn time of at least 20 minutes and 100-200 watts in strength. If most of your recording is going to be in relatively shallow water, a hand held dive light with a movie light bulb can be used to supplement the available light.

RECORDING DIVERS

Here I recommend using a wide angle lens which can be attached over your normal lens. The wide angle lens has several advantages; increased depth of field (usually from one foot to infinity without refocusing) enables you to get full length diver shots from within your lights' range with little if any focusing or zooming required.

Effective lead-in shots can be made by having divers swimming toward the camera from a distance. While actually shooting and lighting up a foreground area of interest, hold the moving divers in the viewfinder. As they approach to within the lights' range you can shift interest to them or let them swim out of the picture. This step can be repeated as necessary to lead into or out of a particular scene. Tracking with your divers gives a feeling of covering ground and anticipates adventure. Capture facial expressions at key times as often as possible. This is best done by stopping recording, focusing in on the face and recording for a 10 count. Your divers should be doing something to relate to their environment—while swimming can be very graceful, too much of it will bore your audience. While the divers are doing as planned, you will need to position yourself to catch the action of their hands and eyes, usually on an eye-to-eye level with them. Change position if it tells the story better. Unlike film cameras, video cameras record images effectively while shooting down or in other low light level angles.

RECORDING MARINE LIFE

Marine life shots will fall into one of the three following categories:

- 1) The need to shoot divers and marine

life, even separately, will still dictate using a wide angle lens. Here again, keep your subjects within your lights' range. Try to spot them from a distance, swim in on an eye-to-eye level and begin recording when within range. Tracking fish from alongside is most effective, but keep one eye open for a possible collision. The use of full body covering is recommended.

- 2) Shooting shy or hard to approach marine life is best done with a conventional zoom lens. While just within your lights' range, zoom in on your subjects to fill the viewfinder. This yields spectacular color and detail. Remember to get front, front-quarter or side views as opposed to fish tails.

- 3) Macro life can easily be recorded by approaching from two feet with the wide angle lens and closing in slowly while tapping the focus control. With practice, you can fill the frame with small critters.

BLENDING DIVERS AND MARINE LIFE

Fish feeding is an excellent way to add some life to your video. Here you will be able to capture some interesting facial expressions on your divers. Moreover, the fish serve as a captive subject for your recording because of their preoccupation with a free meal. Start with a full length shot and close in to pick up more color and expression. Pay close attention to the interplay between divers' eyes and hands and fish swimming in for the take. Shooting lobster, crabs, shells and starfish being held, carefully studied and returned to their homes unharmed will please your audience.

Shipwrecks serve as excellent backgrounds for divers and marine life studies. With the wreck in the background, light up and record schools of fish in and around the wreck. Divers can be instructed to swim toward the camera and slowly out of the scene while you concentrate on fish activity. Interesting diver silhouettes can be recorded while shooting upward through portions of the wreck. Position yourself in key perspective viewpoints while shooting diver or marine life activity with portions of the wreck always visible in the foreground and background.

FINISHING TOUCHES

Play back your tape as soon as possible to verify results. It's fun seeing it replayed while everything is fresh in your mind. Some units offer playback through the viewfinder and can be seen underwater, enabling you to shoot over mistakes. Time the playback and note important points where narrative or music are needed. As you watch, analyze whether any retakes or additional footage will be needed. Schedule these dives as soon as possible.

An easy way to add excitement to your tape is by dubbing music onto it. You need a video recorder with the audio dub feature; most camera-type recorders have this built in as standard equipment.

Next, you will need a TV monitor, cassette tape recorder and patch cords to connect the tape player to your video recorder. If your recorder does not have an audio-in jack, you can connect to the microphone jack. If you vary the volume up at the start of the music and down at the end, you get better results.

Should you wish to mix sounds onto your tape, you will need the following equipment: TV monitor, stereo mixer with amplifier, one or more tape players or one or more turntables, a microphone, patch cords and adapters to go from line out on the mixer to your video recorder input. This will be a mono line in as most video recorders do not record stereo. However, the ones that do have the finest sound quality available surpass even good cassette tape players.

Audio dubbing should be done after the video portions of your tape are completed. With Type I video, this can be done immediately. In Type II video, you will need to complete all additions or deletions and then add sound. Sound can be added as you are editing; however, I have gotten better quality by putting the sound on last.

Two recorder video editing, while not the quality of a professional editing facility, can be used to cut out or add footage. Set one recorder containing your original tape on play, another recorder on play/record. Played back through a TV monitor, as undesired scenes appear, push the pause button on the recording machine. Push pause again to resume recording. You can play many tapes in the play recorder, thus combining your efforts into one master tape.

Professional editing of Type III video can be done as follows: With the use of a character generator, titles and credits are added to the tape. As the tape is played back through a monitor, it can be slowed down or speeded up while viewing to edit in or out precisely what you want onto a new master tape. With the use of a special effects generator, you can add fade and dissolve between scenes, or a multitude of other cuts and wipes commonly seen on TV today. The audio can be further mixed and more professionally done to provide a smooth flow from sound to sound. The end result is a tape of broadcast quality if you wish, usually bumped up to 3/4 inch for editing and one inch for broadcast through a time base corrector.

With many new editors, special effects generators, image enhancers, stabilizers and character generators coming out on the video market, it is now possible to do a fairly professional looking tape at home. As more units are being produced, the prices are definitely coming down.

One thing is for sure, we are on the verge of an exciting new era in diving; underwater video will get diving across to your friends, family and others as never before, thereby kindling their own interest in our fun sport. 

THE Traveler

**A quality-made
polespear
from Mares**

**TEXT AND PHOTOGRAPHY
BY ERIC HANAUER**

The Mares Travel Polespear is six feet long and comes in three sections of aluminum tubing. It can be broken down for easy transport or, using only two sections, become a four foot spear.

The idea of a sectioned polespear isn't new. Ever since divers discovered that longer is better there have been attempts to shorten the six foot sticks so they could be more easily transported. Some of the early models telescoped by means of a locking collar. Unfortunately, they often telescoped at inopportune times, such as the moment a diver was drawing a bead on a huge calico bass.

Voit produced a very successful three section spear under its Swimaster label several years ago. It had the advantage of the telescoping spear without the drawback of its

unreliability. But when Voit got out of the diving business it seemed the sectional polespear would go with them. However, Mares and SeaQuest came to the rescue, picking up the best products of the AMF Swimaster line, including the polespear.

Although it carries the Italian Mares trademark, the Travel Polespear is a California product. It is produced by JBL, a respected manufacturer of spearguns under its own name, as well as the maker of many guns carrying other labels. The company's founder, Joe LaMonica, developed the original Swimaster products,

sold out to Voit and later bought the company back.

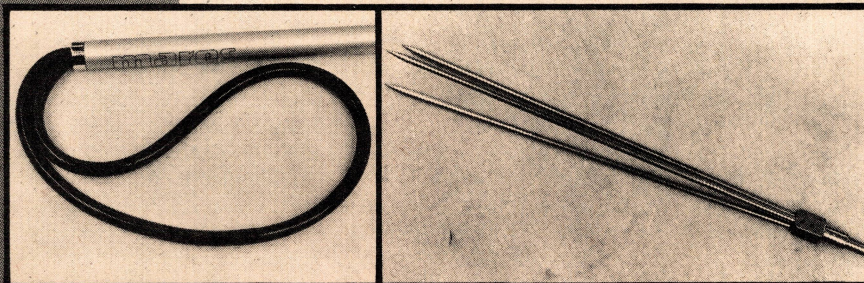
The AMF Mares Travel Polespear comes in three sections of heat treated aluminum tubing, the same material used in ski poles. A satin finish is anodized on the outer surface to provide a non-slip grip. The ferrules (joints), chrome plated brass in the original spear, are now aluminum as well, to prevent corrosion by electrolysis. Two tips are provided with the unit: a stainless steel single barb tip and a paralyzer head. Originally made of condition B stainless steel (the same material as divers' knife blades), the paralyzer now comes in spring steel. That gives it more strength and resistance to bending, but makes it more susceptible to rust. "Some people say the tip holds better when it's rusty," LaMonica volunteers. He adds that an occasional application of sandpaper and elbow grease will keep it looking good.

A diver can use the polespear at its full six foot length or leave out the middle section for a four foot spear. The rubber sling can be shortened to provide greater tension and thus more power. It involves unscrewing the chromed brass butt cap, pulling out both ends of the surgical tubing, then pulling up on the end without the lock nut inside. When the adjustment has been made, pull the sling back out to lock it in position.

After use, the polespear should be broken down and washed. A light coat of grease should be applied to the threads occasionally. For travel, the entire unit fits into a nylon carrying case. Made of the same type of material as buoyancy compensators, the case closes by means of Velcro® tabs. It makes a neat, two foot long package.

The Mares Travel Polespear is a simple, efficient product, made of quality materials. Demonstrating thoughtful design and sound engineering, it should give the diver many years of reliable service. The price is \$65 at your Mares dealer. For further information contact SeaQuest, 2151-F Las Palmas Drive, Carlsbad, California 92008. 🐟

Two tips are provided with the polespear—a stainless steel barb or a paralyzer head (below right). The polespear is powered by an adjustable rubber sling.





The Pro-S compass can be read from the side or top and can be worn on the wrist or mounted in an instrument console. The arrow on the compass card is north seeking.

IKELITE'S Pro-S Compass

Top and Side Reading to Stay On Course

TEXT AND PHOTOGRAPHY BY GEORGE COZENS

From the top of the cliff we had a good view of our dive site. The location was Margate Cove, a slight indentation in Southern California's Palos Verdes Peninsula. The sea was relatively calm and owing to the early morning hour and thick overcast, the sky, still quite dark. This time of year the sun usually burns through the cloud cover around mid-morning. Gathering up the rest of our gear, we descended the steep cliff trail to the small beach below. The dive, itself, was fun, but not exactly spectacular. Upon returning to the surface we were very startled to find the cloud cover had not burned off at all, but had dropped to sea level. We were surrounded by thick, pea-soup fog. The shore was not far off, we could hear small waves breaking on the rocks. But the sound was coming from everywhere: We were lost!

This episode happened to me over a decade ago. Not long afterward, I bought an U/W compass, an Ikelite Pro in fact, and have used it ever since.

The new Pro-S compass is the result of over one and one-half years of design and development by Ikelite, a company with about 20 years of experience in the making and marketing of diving compasses. The Pro-S offers some of the same fine features as the Pro model. Ver-

sions of both are available for use on the diver's wrist or for placement in a Penn-form instrument console. Wrist-mounting compasses are provided with neoprene rubber straps and non-magnetic stainless steel buckles, while console versions have an integral mounting collar for easy installation. Durable Lexan® plastic is used in the compass cases and bezels. The needle movements have precision, jeweled bearings, for greater accuracy, less friction and reduced wear in use. In addition, each compass capsule is filled with a special fluid to dampen the movement and make the compass insensitive to changes in pressure.

The primary differences between the Pro and the Pro-S models are in the needle and rotating bezel. This latter, used to set the course comparison marker, is a concept Ikelite brought to the diving industry back in 1964. In the Pro model, the bezel encircles the compass face and has two tic marks on its inside edge that can be aligned with the needle. It is top reading, meaning the diver must look down into the compass to read it. The Pro-S model, however, has a more sophisticated bezel and luminous compass card, or disk, instead of a needle. This design results in a higher profile, but permits both top and side reading—the S in

Pro-S stands for side reading. When held level, the compass card arrow seeks magnetic north. To use, simply point the lubber line (the stationary arrow on the axis of the compass) horizontally in the direction of interest, and rotate the bezel until the white line (course indicator) is centered over the north indicator. That's all that is needed for top viewing. Side viewing is just as simple. When the course and north indicators are aligned as described, the desired course heading on the bezel appears behind a tic mark in the side window and the same degree reading on the compass card will show under it. Just keep these two degree markings matched under the tic mark and you'll be on course. The advantage of side viewing is greater potential accuracy in use, because the compass can be raised to the line of sight and monitored, without losing sight of the course ahead.

Because of the non-corrosive materials, the only suggested maintenance is a freshwater rinse after use, to remove salt and sand from around the bezel. Also, avoid prolonged exposure to heat.

You already know my opinion of diving compasses, and the Ikelite Pro-S looks like an excellent one. At \$39.95, it might not only make your diving more enjoyable—it might just be a lifesaver. 

Insiders in the dive industry have expressed the feeling more than once that closed cell foam neoprene would soon be replaced as the insulating material in drysuits. Harvey's Aqua Capsule II is part of the first generation in this advancement.

The Aqua Capsule II consists of two layers, a waterproof outer shell and an insulating inner shell. The outer shell resembles a conventional drysuit with a waterproof Talon® zipper across the shoulders. The difference is that the material is heavy duty nylon pack cloth. It is made waterproof by a polyurethane coating on the inside. Seams are stitched with a special four needle sewing machine for incredible strength and covered with a heat sealed polyurethane tape. Two additional layers of nylon pad the knees.

Designers at Harvey's chose to make the cuffs and collar out of the more conventional skin/nylon foam neoprene. They are tucked under to make the seal. Should a rip occur, standard wetsuit cement will solve the problem. The attached booties are also made from foam neoprene and dipped in vinyl. A hard inner sole protects the feet. The key to warmth in this type of suit is having an insulating layer of air on the inside. Separate inlet and outlet air valves are provided. Canadian White Valves were chosen for their reliability. They can be positioned side-by-side on the chest or with the inlet valve centered on the chest and the outlet on the upper left arm. The choice is often dictated by the type of BC worn. Horse collars require the latter configuration. A low pressure hose with a quick disconnect is run from the inlet valve, under the arm and to the regulator.

The wonderful feature of the Aqua Capsule II is the soft, insulating, pile undergarment. You put it on like coveralls and zip it up the front. Foot straps keep the legs from riding up when putting on the outer shell. When the suit is taken off after a dive you can continue wearing the undergarment for warmth. Thirty and 23 ounce undergarments are available depending on the amount of insulation required. The heavier piece has shoulder and knee pads. Both garments have nice pockets for keys and cold hands.

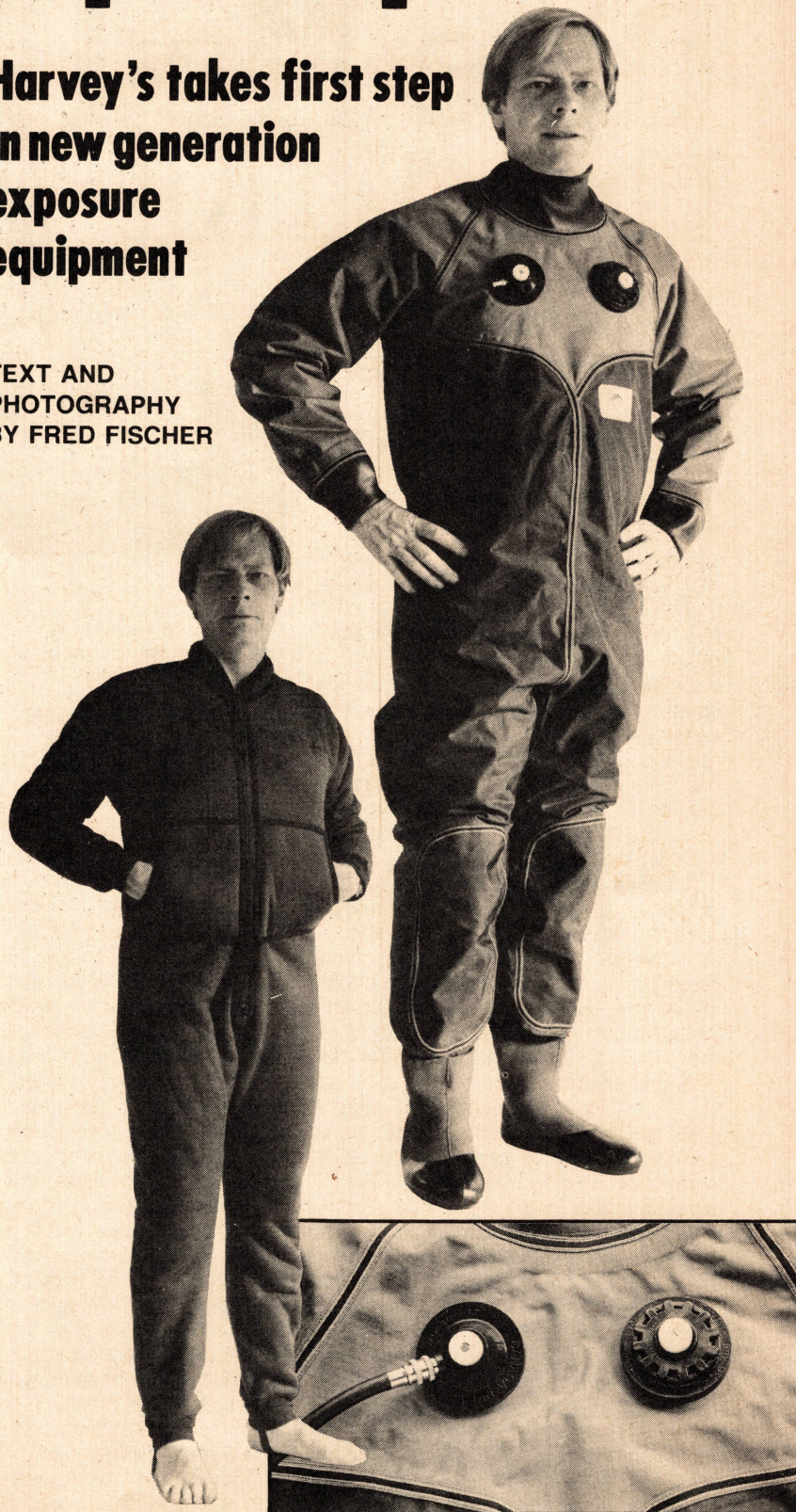
I was able to test the Aqua Capsule II on several dives beneath the thermocline at 56°F. To my delight air consumption was low owing to the additional warmth provided by the lightweight underwear. The cold could only be felt where the insulation was compressed under my shoulder straps and at my elbows and knees when they were flexed. Movement in the suit is quite unrestricted. The underwear and the loose fit of the suit (it can hold a lot of air) make it more buoyant than conventional drysuits. I required six to ten pounds of additional weight. I had some difficulty orienting my body during ascent so that I could vent air out of the chest valve. Divers new to this type of drysuit should ascend and descend on an anchor line while getting used to it.

In conclusion I found the Aqua Capsule II to be a definite step forward in the progress toward more comfortable dive equipment. If you decide to purchase an Aqua Capsule II, you can choose from a wide selection of colors for the outer shell. Pilewear bootie liners and three finger gloves are available. The price at Harvey's dealers around the country is approximately \$425 for the drysuit, \$75 for the lightweight pilewear, and \$95 for the deluxe pilewear. ✕

Aqua Capsule II

Harvey's takes first step in new generation exposure equipment

TEXT AND
PHOTOGRAPHY
BY FRED FISCHER



The Aqua Capsule II drysuit is made of sturdy nylon pack cloth, waterproofed by a polyurethane coating on the inside. All seams are sewn and sealed with polyurethane tape. Push button inlet and outlet valves are provided and a low pressure hose connects the inlet valve to the diver's regulator. The diver is kept warm by an insulating pile undergarment with pockets and a zip front.

Dive-Med First Aid Kit

A take-along minor
treatment center

TEXT AND PHOTOGRAPHY
BY BONNIE J. CARDONE

The adventure of a lifetime happened to me not long ago: I was shipwrecked on a deserted tropical isle. Although our group included several doctors, only the contractor from Philadelphia and his dentist roommate thought to bring along some minor medical supplies when we hastily abandoned ship. It was several hours before our luggage was rescued. Thus, when one of the physicians prescribed aspirin for an ailing passenger, it was the contractor who dispensed it. This wise man had made up his own first aid kit.

Another wise man, John O'Hanlon, president of Midwest Life Support Systems, has designed a first aid kit specifically for divers. I wish I had it when I was marooned on that island. The Dive-Med would have easily fit into my "survival kit" (a heavy duty garbage bag containing all the things I thought necessary for deserted isle living). It comes in a compact (8 x 5 x 2½ inches), lightweight case of ABS plastic. It is sealed by a neoprene gasket so it's also watertight. Inside is almost everything you might ever need for diving first aid.

Two very valuable pamphlets are included in the Dive-Med kit. The Reader's Digest *Handbook of First Aid* is 23 pages of illustrations and instructions for treating everything from airway obstruction to choking to heatstroke to unconsciousness. The *DAN Underwater Diving Accident Manual* tells readers how to recognize and provide immediate care for such things as air embolism, decompression sickness, pneumothorax, ear disorders and motion sickness. The DAN phone number appears in large print on the front. DAN stands for Divers Alert Network. By dialing the DAN number, manned 24 hours a day, the caller will be connected to a physician trained in dive

medicine. The DAN booklet has a set of Reuter dive tables on the back cover. Additional first aid instructions appear on the inside cover of the Dive-Med kit. These are all also covered in the *Handbook of First Aid*. Besides the two pamphlets, the Dive Med kit contains: an instant ice pack for control of swelling owing to burns, bruises, sprains, contusions, minor bleeding, etc.; a large sterile gauze compress for dressing large wounds and burns; a roll of adhesive tape; three foil packets of an antibiotic ointment; three vials of insect sting soother; five foil packets of disposable, isopropyl alcohol saturated pads; a three inch wide elastic bandage; a two inch in diameter sterile eye dressing; four, three by three inch sterile gauze pads; two, two by three inch bandages; three fingertip bandages; one dozen, one by three inch bandages; a small bar of soap; a bottle of eye wash; a pair of blunt-nose scissors; a pair of needle-nose tweezers; and three small plastic boxes in which to store personal medications such as aspirin, decongestant, motion sickness pills, etc.



medicine. The DAN booklet has a set of Reuter dive tables on the back cover.

Additional first aid instructions appear on the inside cover of the Dive-Med kit. These are all also covered in the *Handbook of First Aid*. Besides the two pamphlets, the Dive Med kit contains: an instant ice pack for control of swelling owing to burns, bruises, sprains, contusions, minor bleeding, etc.; a large sterile gauze compress for dressing large wounds and burns; a roll of adhesive tape; three foil packets of an antibiotic ointment; three vials of insect sting soother; five foil packets of disposable, isopropyl alcohol saturated pads; a three inch wide elastic bandage; a two inch in diameter sterile eye dressing; four, three by three inch sterile gauze pads; two, two by three inch bandages; three fingertip bandages; one dozen, one by three inch bandages; a small bar of soap; a bottle of eye wash; a pair of blunt-nose scissors; a pair of needle-nose tweezers; and three small plastic boxes in which to store personal medications such as aspirin, decongestant, motion sickness pills, etc.

The Dive-Med kit would have come in handy on my shipwreck trip. The antibiotic ointment and bandages could have been used for the scratches some members of our group suffered when they walked to shore among shallow coral heads; the insect sting soother would have been great when the wind died and the "bugs with teeth" came out.

You may never be shipwrecked on a deserted isle, but I'll bet you'll find plenty of uses for the Dive-Med First Aid Kit. Since it's so compact, lightweight, watertight and rugged, you can toss it in your gear bag and take it with you every time you go diving. The kit sells for \$35.95. Also available is the Dive-Med Deluxe Kit. Its rugged O-ring sealed case is two inches longer and nearly three inches wider. In addition to the contents listed for the smaller kit it also contains a wire splint, space blanket, triangular bandage, larger compress and larger ice pack. It sells for \$49.95. See both kits in your dive store or contact: Midwest Life Support Systems, 9832 Manchester Road, St. Louis, MO 63119.

SAGA OF THE MADISON

BY SCOT SMITH

The historic Suwannee River rises and begins its slow meandering journey to the Gulf of Mexico from deep within south Georgia's "Land of Trembling Earth," the Okefenokee Swamp. In years past, her 190 mile length served as a natural highway to the many small settlements and farms that nestled on her shoreline.

Many artifacts lie strewn across her peat and sand covered bottom waiting for the fearless diver to "stumble across." Both decaying plant life in her headwaters and the everpresent cypress trees stain her waters a dark coffee color with tannic acid, thereby rendering visibility in the river poor to nil. Even the most powerful dive light will emit but a dim glow.

The black water is by no means the only deterring factor involved. Many supposedly dangerous freshwater denizens also frequent these same waters: alligator gars (a formidable freshwater version of the barracuda), alligator snapping turtles (fully capable of severing an arm or finger) and the always watchful alligator itself, dwell within the Suwannee's banks.

Diving where potential finds are so abundant is worth having to forego these and other inherent inconveniences. When one weighs the possibility of discovery against the bothersome aspects of blind diving, the more adventurous spirit in some of us takes over.

The river itself, although straddled by several bridges, is somewhat inaccessible. Diving here is made a great deal easier when the diver is aided by a powerboat. Sand trails appear up and down her banks but their origin is only known to the local inhabitants. In fact, this entire part of northern Florida is crisscrossed with such roads and if the diver is not careful he/she might wind up lost forever in the palmetto forests and glades!

In the past, boats were not only the main source of transportation on the "Swanee," as Stephen Foster called her in his famous song, but were also the sole means of commerce for this remote area. Paddleboats constantly plied her mirror-like waters with one particular of note: Lying, just barely submerged, in one of the area's more famous springs, are the remains of the Suwannee riverboat *Madison*. During the 1800s she would make weekly runs up and down the river from Cedar Key, ten miles to the south of the Suwannee's estuary in the Gulf of Mexico, to landings scattered up

and down the lazy river's banks. On-board she carried a line of general merchandise to be traded at these wharfs to the local residents and homesteaders in exchange for such things as venison, beeswax, deer skins and tallow.

Not only was the *Madison* used as a floating storehouse and trading post but she also saw action in the Indian wars that plagued the area, for the settlers felt there was no room for the Creeks and Seminoles who had long called the Suwannee home.

In later years the *Madison* would make yet another mark on the region's history: Her captain, a Mr. Tucker, as proud as any man and prouder than most, was once bet he couldn't navigate his vessel as far north as the town of White Springs. He knew that "his" river concealed many snags and ever changing sandbars, but his reputation was at stake and so he eagerly accepted the wager. It was reputedly said he swore he would get the *Madison* to White Springs, "even if he had to run her on wheels!"

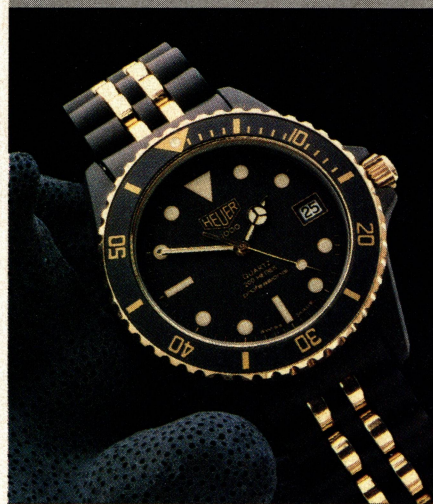
After unloading all unnecessary cargo to decrease his boat's draft, off he set. The *Madison* possessed a powerful stream whistle which could be heard ten miles in the distance. It constantly shrieked of her approach, alerting the river folk of her progress. Crowds waved and cheered from the banks as she plowed her way slowly upstream toward White Springs.

Whenever a hidden snag or bar was encountered, something was either thrown overboard or removed from her superstructure to lighten the load. Nothing without positive purpose was safe from the fireman's axe. Her paddles would churn the dark waters into a briny froth and the aging riverboat would tremble, but over each obstacle she went.

As the historic journey continued, the more formidable foe became the Suwannee's low overhangs. They swept off her smokestacks and eventually demolished the *Madison's* pilothouse, but Captain Tucker would not abandon his wager.

Finally, after endless hours of perseverance, she rounded one more bend. There, with the banks overflowing with wellwishers, was White Springs . . . He had made it! Or, perhaps more fittingly, the *Madison* had made it! A whoop went up, almost as deafening as her mighty whistle! Captain Tucker and the *Madison*

BLACK CORAL II



ELEGANT,
EVEN AT
660 FT.

Heuer.



The name is synonymous with precision timekeeping. From the Ferrari Formula I team to the 1980 Olympics, Heuer offers you the dependability of 120 years of experience.

Turning bezels with click stops, tempered mineral crystal, 10 microns of 18K gold, double safety locks and luminous dial for easy reading under water.

Heuer. Even under water, the elegance stands out.

\$37500

Men's & women's available in:

- Black with gold accent
- Stainless with gold accent
- Stainless only
- Gold only

1-800-621-0660



B.D.P. Inc., P.O. Box 195
Vernon Hills, Illinois 60061

MasterCard & Visa accepted
Illinois residents add 6 1/4% sales tax.
Also available at finer diving stores.

circle #130 on Reader Service Card

SKIN DIVER SEPTEMBER 1984 57

Our Best To You

From Seatec®

Comes
total
comfort,
freedom
and durability
in **Manta II**,

a new slim line,
contour fit, buoyancy
compensator. Other
fine inflatable products

include the **Stringray**, **Bluefin**, and **Malibu**.

Cavalero offers **Arbaleta**® and many
other dive products to meet your every need.

See your Dealer
for the full line
today of products
from Seatec

& Cavalero®

Send \$1.00 for full color
Seatec and Cavalero catalogs

Seatec • 600 N. Batavia • P.O. Box 1109 • Orange, Ca 92666
(714) 639-6662 • Cable Seatec Orange TWX 910593 1648
Seatec/Cavalero are divisions of Inflatable Systems, Inc.



circle #131 on Reader Service Card

THE MADISON

had churned into the history books, not unlike another famous river pilot, Samuel Langhorne Clemens: Mark Twain.

The years passed as slowly as the Suwannee itself, but the *Madison* continued her ever vigilant run up and down its length. As recognition of her push to White Springs, the Suwannee was declared a navigable waterway, as she still remains today.

With the passing of the years came what Southerners called "The War Between the States," for the South saw nothing civil in that confrontation. Immediately the *Madison* and Captain Tucker were pressed into service.

One evening, under cover of darkness, the *Madison* snuck out of the Suwannee's mouth and captured a much more heavily armed and faster federal gunboat. It was beginning to look as though she were leading a charmed life, overcoming one obstacle after another.

As the war progressed, Captain Tucker and his rag-tag regiment were ordered to the battlefields of Virginia where, from then on, they were to be known as Company H, 8th Florida Infantry. It is not known whether the Captain survived the war, but the *Madison's* fate is known.

Not willing to allow the *Madison* to be used in the federal cause, Captain Tucker scuttled her where he felt sure she would remain hidden until his return. What he hadn't foreseen was the desperation of the region's settlers in the following years. The *Madison* was cannibalized of her lumber for use in rebuilding devastated homes and farms, and her once powerful boilers were hauled away to be used in a salt factory on Cedar Key.

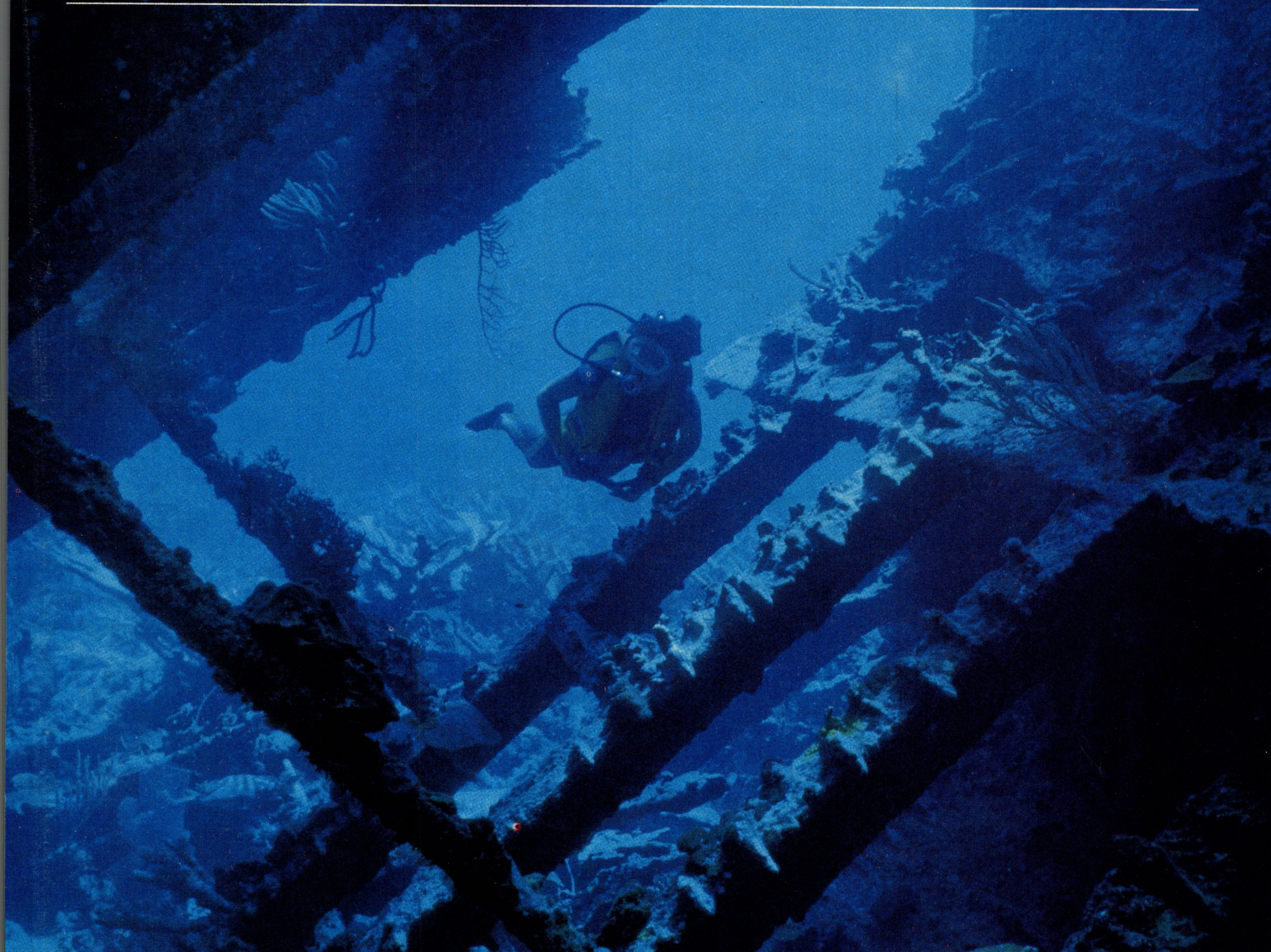
For 120 years the *Madison* has called the shallow waters of Troy Springs home. All that remains of this once proud riverboat is her rib structure, only barely discernible to the untrained eye.

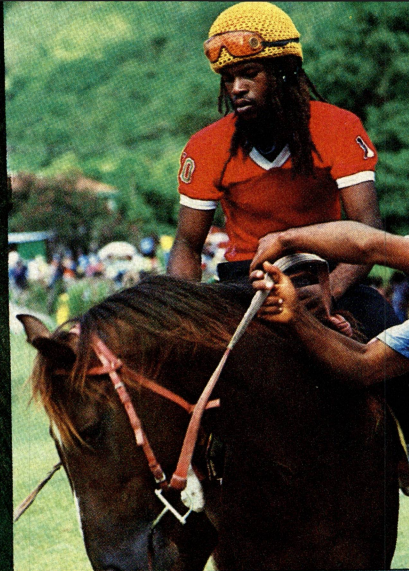
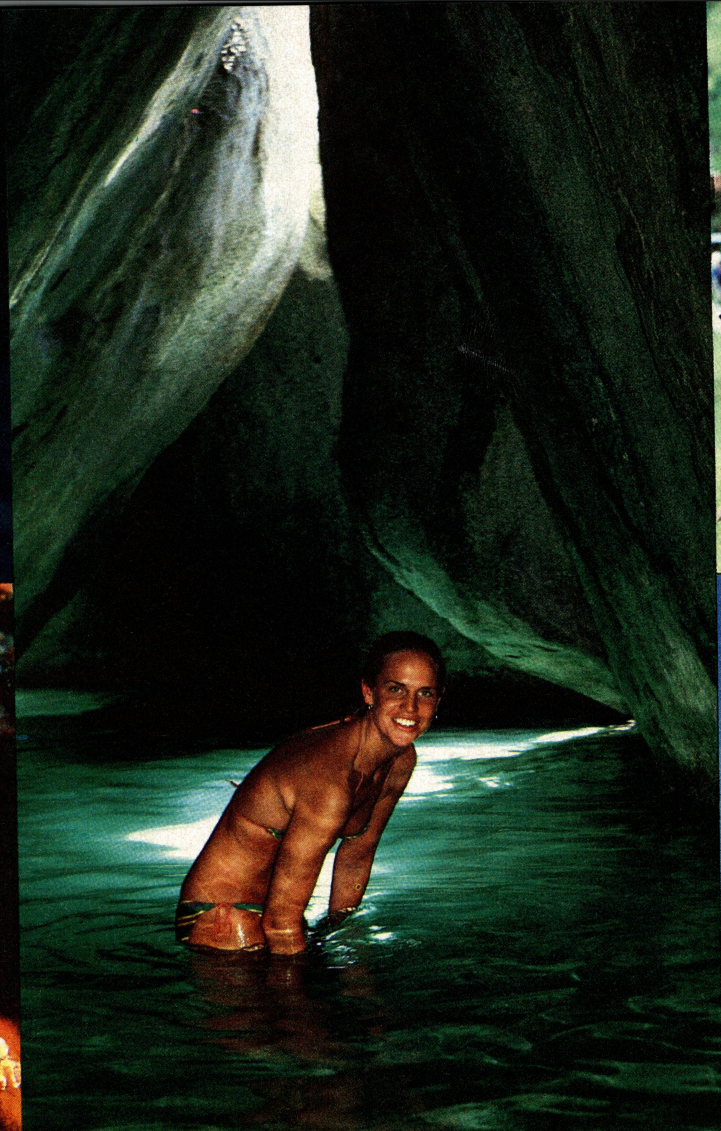
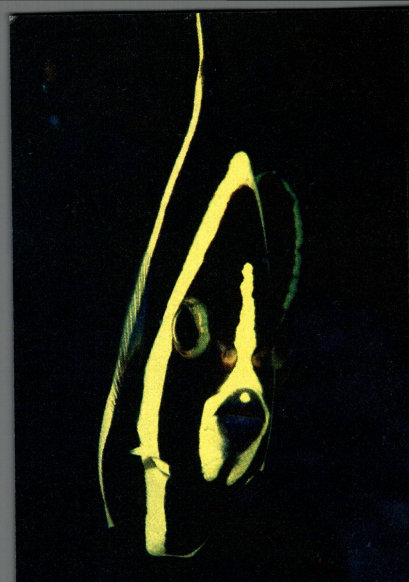
Countless divers visit her gravesite without realizing the important role she played in Florida's history. Somehow, even as she sleeps, another obstacle has been surpassed. She has resisted the rape of many an inconsiderate diver who would do further damage to her.

If you should ever be fortunate enough to visit this area of northern Florida, why not stop by and visit this memento of Suwannee history? It is said that on summer evenings, if you listen really hard, you can still hear the drumming of her paddles and the wail of her whistle resounding up the river and the backwater sloughs. . . . Just be sure to treat this grand old lady with the reverence and respect that she deserves. For her resting place should forever be there on the edge of the river she's always called home. 

SDM SPECIAL SECTION

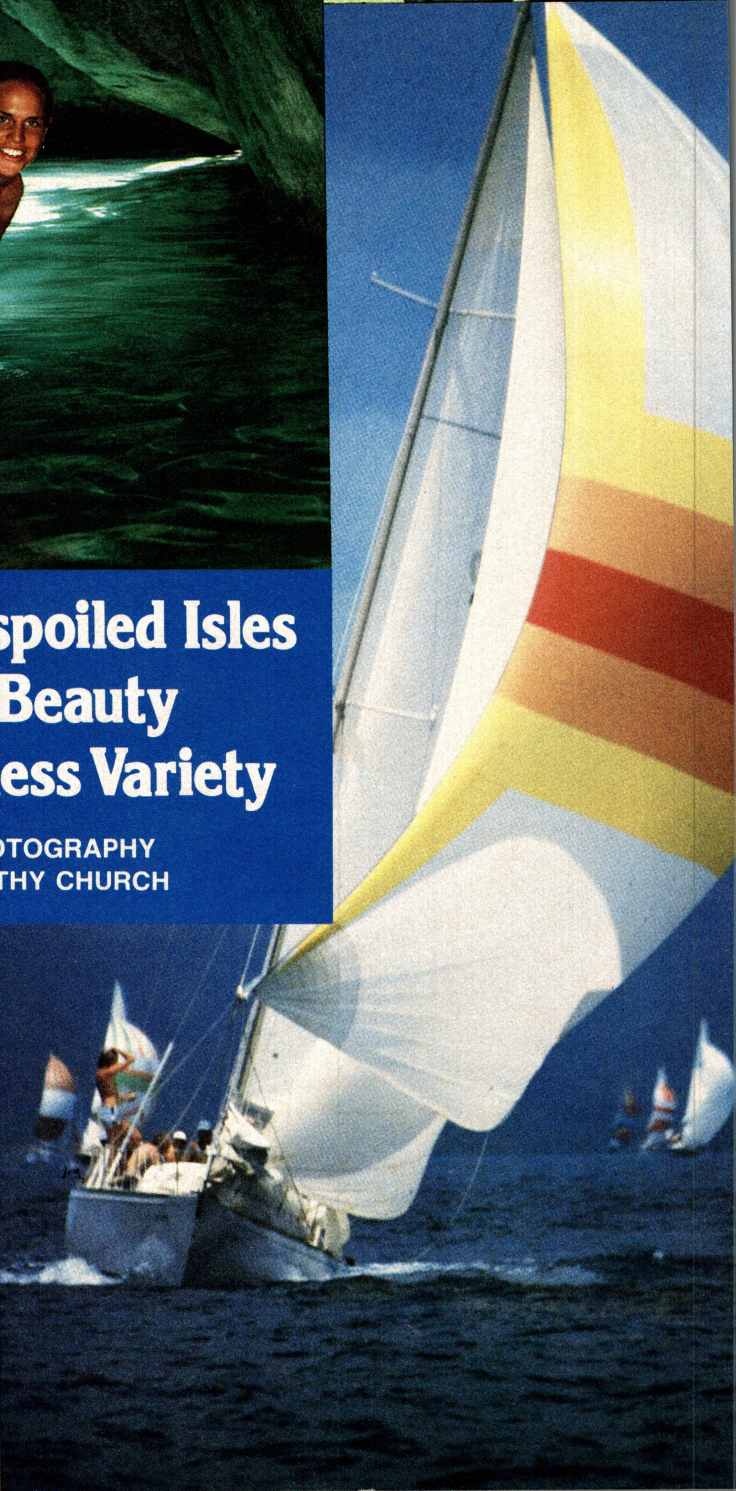
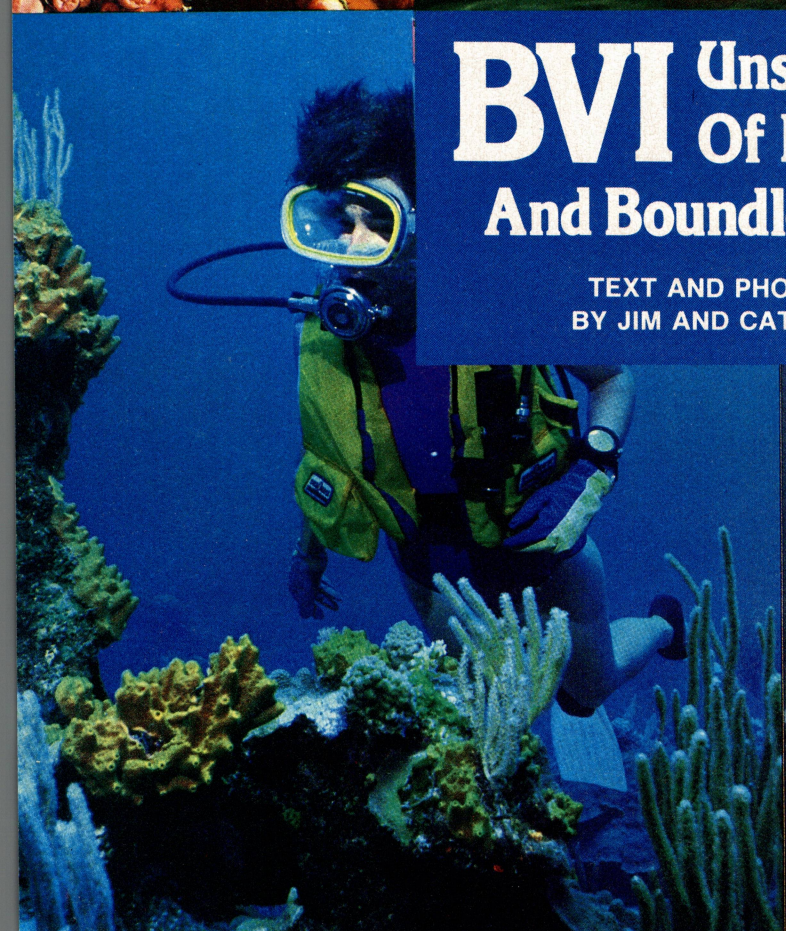
THE BRITISH VIRGINS





BVI Unspoiled Isles
Of Beauty
And Boundless Variety

TEXT AND PHOTOGRAPHY
BY JIM AND CATHY CHURCH



Combine snorkeling, scuba diving and sailing with sand, sun and seclusion, and you have the British Virgin Islands. Long known as one of the world's finest sailing areas, the BVIs also offer excellent facilities for both the casual diver who enjoys other luxuries and the more serious diver who wants to dive all day. But don't expect discos and tourist trap hoopla. Everything is low key.

The balmy subtropical climate is inviting. The tradewinds provide cooling breezes and temperatures range from 77 to 85°F throughout the year, dropping about ten degrees in the evening. Water temperatures range from 76 to 80°F in winter and from 80 to 84°F in the summer. You can dive year-round with visibility of about 50 to 100 or more feet.

The basic entry requirement is a valid passport. U.S. and Canadian citizens can use voters registration cards, authenticated birth certificates or citizenship certificates. Before planning your trip, write to BVI Tourist Board, 370 Lexington Ave., New York, NY 10017; telephone (212) 696-0400, for a free copy of the British Virgin Islands Tourism Directory. It gives complete listings of airlines and water ferries serving the BVI, rental cars, hotels and other accommodations, marinas, recreation and other helpful information about the islands. Tell them you are a scuba diver and they will include the BVI dive operators' brochures.

TORTOLA

Tortola is an undeveloped island without the hustle and bustle of the big city. Rugged mountain peaks rising to almost 1,800 feet dominate her southern coast, in contrast to the white sand beaches and banana, mango and palm trees on her northern coast. Twelve miles long and three miles wide, and with a population of only 9,000, Tortola is the largest BVI.

From the U.S., fly to San Juan, Puerto Rico, then take a connecting flight to Beef Island Airport. If you are visiting the U.S. Virgin Islands first, you can take a commuter flight to Beef Island; the VI Seaplane Shuttle to West End or a water ferry to West End or Road Town.

DIVE OPERATIONS

All of the dive operators furnish rental equipment and air fills, stock basic sundries such as T-shirts and books, offer resort courses and other instruction and can make simple repairs.

Aquatic Centres, owned and operated by Luana and George Marler, has dive shops at both Prospect Reef Resort and

Treasure Isle Hotel. George is an accomplished U/W photographer and can give advice or assistance when needed. George and Luana have authored several articles and booklets in addition to their book, *The Royal Mail Steamer Rhone*.

Aquatic Centres has daily boat dives, with rides to the sites averaging about 20 minutes. Their boats leave (from Prospect Reef and Treasure Isle jetty) at 8:30 am and 2:00 pm. *Apache* (a 27 foot Lindsay) usually carries up to eight divers, but can take up to ten. *Tejas II* (a 35 foot Legnos) usually carries 12, but can take 18 upon request. Captains Jim Scheiner and Randy Keil know the dive sites well and will show you a good time. Their sites include Angelfish Reef, Blonde Rocks, The Indians, Painted Walls and the *Rhone*.

Caribbean Images is based at Prospect Reef Resort. Owner Dave Mansfield offers overnight processing for Ektachrome color slides, and may reduce this to a four hour service and may also add color print processing. You can leave your film at any Tortola dive shop.

Dave can videotape divers underwater and will sell them the tape. In conjunction with Aquatic Centres, Dave has a glass-bottom boat—the 24 foot *Snoopy*—that allows non-divers in your group to watch you dive the reefs and the *Rhone*. Tours

leave daily from Road Town; call Aquatic Centres (42858) for reservations.

Blue Water Divers, at the Nanny Cay Marine Centre, is owned by Mike Royle and Cyril Romney. They have a package with Sebastians on the Beach Hotel.

Their 30 foot *Akadba* carries 2-14 divers, and the 27 foot *Blue Runner* carries up to eight divers. Their leisurely trips usually run from 9:00 am to 2:00 pm. Regular sites include the *Rhone*; Santa Monica Rocks, an open water seamount; and Brenner's Bay, a relaxing dive starting at about 15 feet and dropping down to stands of black coral at 80 feet.

Underwater Safaris, owned by Bob and Gayle Stafford, is at, and has a dive/hotel package with, the Moorings Mariner Inn, Road Town. They also have an air station at Cooper Island.

U/W Safaris has three boats: *Mako* (a 42 foot Thomas hull) can handle 12 divers; *Rendevous* (a 38 foot Delta) handles 16 divers; and *Underwater Safaris I* (a 27 foot Delta) handles eight divers. Their van picks divers up at Road Town locations, and their boats pick divers up at different anchorages from Norman to Ginger Islands. They offer a two tank morning and a two tank afternoon trip.

Their divemasters and instructors know the U/W terrain and critters and give as

TORTOLA HOTELS/RESORTS

BVI Aquatic Hotel

P.O. Box 605
West End, Tortola, BVI
(809) 49-54234

Cane Garden Bay Beach Hotel

P.O. Box 570
Tortola, BVI
(809) 49-54639

Castle Maria Hotel

P.O. Box 206
Road Town, Tortola, BVI
(809) 49-42553/42515

CSY Yacht Club

P.O. Box 157
Road Town, Tortola, BVI
(809) 49-42741

Fort Burt Hotel

P.O. Box 187
Road Town, Tortola, BVI
(809) 49-42587

Long Bay Hotel

P.O. Box 433
Road Town, Tortola, BVI
(809) 49-54252

Maya Cove MCYC Ltd.

P.O. Box 399
Road Town, Tortola, BVI
(809) 49-52518

Moorings Mariner Inn

P.O. Box 139
Road Town, Tortola, BVI
(809) 49-42332

Prospect Reef Resort

P.O. Box 104
Road Town, Tortola, BVI
(809) 49-43311

Sea View Hotel

P.O. Box 59
Road Town, Tortola, BVI
(809) 49-42483

Sebastians on the Beach

P.O. Box 441
Road Town, Tortola, BVI
(809) 49-54212

Smugglers Cove Hotel

P.O. Box 4
West End, Tortola, BVI
(809) 495-4234

Sugar Mill Estate Hotel

P.O. Box 425
Road Town, Tortola, BVI
(809) 49-54355

Tamarind Country Club Hotel

P.O. Box 509
East End, Tortola, BVI
(809) 49-52477

Treasure Isle Hotel

P.O. Box 68
Road Town, Tortola, BVI
(809) 49-42501

Village Cay Marina

P.O. Box 145
Road Town, Tortola, BVI
(809) 49-42771

BVI

much guidance and supervision as required. Typical dive destinations are Blonde Rocks, The Indians, Alice in Wonderland and the *Rhone*.

ACCOMMODATIONS AND DINING

Treasure Isle Hotel has a relaxed, friendly atmosphere. On a wooded hillside overlooking the blue waters of Road Harbour, about a mile from Road Town, the Treasure Isle Hotel is about 150 yards from the jetty where the Aquatic Centres dive boat leaves at 8:30 am each morning. The food and service are excellent.

The 40 rooms have individual balconies, air conditioning, phones and room service, and a conference room is available. The freshwater pool is sparkling, tennis and squash courts are nearby and their Beach Club on Cooper Island is only 20 minutes away by speedboat.

Prospect Reef Resort has 131 rooms—ranging from studio to villa or townhouse accommodations—a conference center, a small shopping arcade, two restaurants, a kiddie pool, diving pool, junior olympic pool, a sea pool, tennis, golf, a marina with sailboat rentals and dancing

and entertainment in the evenings in season. The oceanfront seawall encloses the sandy beach.

Prospect Reef Resort is served by Aquatic Centres. If you are there for serious diving, request a room close to the dive shop. This is a large resort and some rooms are a few hundred yards from the dive boat.

The Moorings Mariner Inn is the place to stay if you dive with U/W Safaris. You can play tennis between dives or, you might just relax with a cool drink and snack prepared in your kitchenette and listen to the sounds of palm leaves rustling in the breeze.

There is a pool, poolside bar and restaurant, all within 100 feet of the Underwater Safaris dive shop and boats. The Ample Hamper, where you can buy picnic supplies and liquor, is about a block away. And, if you enjoy sailing, Moorings

Mariner Inn has a fleet of sailboats and a provisioning service. Underwater Safaris provides tanks and other diving equipment for the sailboats.

VIRGIN GORDA

Although Virgin Gorda is a quiet, rural island with a population of about 1,000, it is home to some surprisingly sophisticated resorts and comfortable hideaways. The northern half of this 15 square mile island is mountainous, with a 1,370 foot peak. The southern half is flat and dry, with giant boulders decorating the scene. Virgin Gorda has long been a stop-over for yachtsmen. And today, this second-largest BVI is a destination for snorkelers and scuba divers as well.

Landing on the 3,000 foot airstrip is a thrill in itself. Air BVI can fly you in from Beef Island, Tortola or San Juan; Crownair has flights from San Juan and St. Thomas. If you prefer a water ferry, Speedy's Fantasy runs from Road Town to Virgin Gorda on Monday through Saturday. When going to most hotels on North Sound, your cab driver will radio ahead so a boat from your hotel meets you at Leverick Bay or Gun Creek.

The Baths on Virgin Gorda's southwest shore are an extraordinary formation of huge boulders that form a labyrinth of passageways and caves dimly lit by shafts of sunlight that penetrate between the rocks.

CAMPGROUNDS

Brewers Bay Campground

Box 185
Road Town, Tortola, BVI
(809) 49-43463

Tula's N & N Campground

(Little Harbor, Jost Van Dyke, BVI)
Box 8364, St. Thomas, USVI 00801
(809) 774-0774



DON'T GO DIVING WITHOUT IT

Your Certification Card, Visa, Master Charge or American Express Card and your Unlimited Diving Card are 3 things you simply should not leave home without.

The most exciting new concept in Caribbean diving is the Aquatic Centres Unlimited Diving Card. This card is your ticket to dive to your hearts content. During your stay with us in the B.V.I., your Unlimited Diving Card provides you with all equipment and unlimited diving for as long as you are on our island, a week, a month or a year. No Gimmicks, No Extras. Get your \$250.00 Unlimited Diving Card by calling or writing our stateside office.

More for '84 has become the motto of the Aquatic Centres and more is what we're providing. Tejas II - our newest dive boat, George Marler Photo Courses, Overnight film processing and expanded inventories of diving equipment plus the Unlimited Diving Card.



1-800-345-6296

CALL TODAY - AND MAKE YOUR B.V.I.
DIVING EXPERIENCE THE BEST
IN THE WORLD.

CALL OR WRITE FOR DETAILS AND FULL-COLOR BROCHURES.

AQUATIC CENTRES



BRITISH VIRGIN ISLANDS
ROAD TOWN, TORTOLA, BRITISH VIRGIN ISLANDS
STATESIDE OFFICE / JW PEPPER, P.O. BOX 850, VALLEY FORGE, PA 19482
1-800-345-6296 (IN PA CALL 1-800-362-5255)



"THE ULTIMATE IS THE GLORIOUS LAMMER LAW"

SKIN DIVER, JUNE '84



Setting The Standard in the BRITISH VIRGIN ISLES

The owners of the world's
largest Trimaran invite you to—

- Dive
- Sail
- Windsurf
- Water Ski
- Beachcomb
- or just relax in



SPACIOUS COMFORTABLE INFORMAL LUXURY

All at affordable prices



Toll Free

800-648-3393

Trimarine Boat Co., Ltd.

Homeport, St. Thomas, U.S.V.I. 00802

BVI

DIVE OPERATIONS

Dive B.V.I. is at the Virgin Gorda Yacht Harbour. Owned by Joe Giacinto, Dive B.V.I. offers snorkel trips (non-snorkelers are welcome) as well as one and two tank dive trips for up to ten divers aboard the 35 foot M/V *Seacat*. Dive destinations include Tow Rock, the *Chicuzen* and Scrub Island.

Dive B.V.I. has hotel packages with Olde Yard Inn and with the Marina Cay Hotel on the tiny island of Marina Cay east of Tortola. (At this writing Dive B.V.I. and Olde Yard Inn are undergoing ownership changes.)

Kilbride's Underwater Tours is at the eastern end of Virgin Gorda's North Sound, on its private island, Saba Rock. Bert Kilbride has been diving in the BVI since 1959 and in the dive business since 1964. Today, at 70, with his salt-and-pepper hair and beard, mischievous grin, sparkling eyes and gold coins hanging from his neck, he is truly a man of the sea.

With the 42 foot *Shaw*, 30 foot *Saba* and 21 foot *Shango*, Bert and family make pickups at moored yachts at 8:30 am and from hotels at 9:00 am, returning about 1:30 pm. Instructor Jim Kilbride is a natural model who poses almost instinctively when you point your U/W camera at him. Their sites include the Chimney at Great Dog Island, the Invisibles, the *Rhone*, *Rocus* and *Paramatta*, a paddlewheel wreck with a large section of the stern intact. The *Paramatta* is a beautiful wreck.

The Kilbrides have hotel packages with the Bitter End Yacht Club and with Drakes Anchorage Hotel on Mosquito Island. They also have a diver pickup service with Biras Creek Hotel, Leverick Bay Hotel, Little Dix Bay Hotel and Tradewinds Resort.

ACCOMMODATIONS AND DINING

Most Virgin Gorda hotels are expensive, with winter AP double rates of about \$220 to \$350 per day. (AP rates include all meals.) However, these rates also include many extras such as snorkeling, sailing, beach parties, tennis and other activities.

Biras Creek Hotel, restaurant, bar, terraces and shop are on a hill overlooking three separate bays. Sixteen cottages, with twin suites, stretch along a white coral beach and a saltwater pool is centrally located among the cottages. The Bitter End Yacht Club has 35 elegantly furnished rooms on a sheltered peninsula. Inquire about their special family plan and group air charter service. At Little Dix Bay Hotel the dining atmosphere is sophisticated and elegant. The simple rooms are hidden among the palm trees along a beautiful beach. They offer horseback riding, water skiing, tennis, sailing and other activities. Olde Yard Inn, which has no pool, beach or sailboats, offers more basic accommodations. Tradewinds Resort, high on the lee side of a terraced hill, provides a panoramic

CAR RENTAL COMPANIES

Alphonso Car Rentals

Fish Bay, Tortola, BVI
(809) 49-43137

Budget Rent-A-Car

Wickhams Cay 11,
Tortola, BVI
(809) 49-42639

Hertz Car Rentals

Road Town, Tortola, BVI
(809) 49-43322/42122

International Car Rentals

Road Town, Tortola, BVI
(809) 49-42516/7

Nibb's Car Rental

Opposite Police Sta.,
Tortola, BVI
(809) 49-42193/4

Anytime Car Rental

Way Side Guest House
Tortola, BVI
(809) 49-42875/43107

Bomba Car Rentals

Virgin Gorda Yacht Harbor, BVI

Speedy's Car Rental

The Valley, Virgin Gorda, BVI
(809) 49-55235/55240

view of the North Sound. The rooms are attractively decorated in the Caribbean motif and a shuttle service connects the rooms to all other parts of the resort.

VIRGIN GORDA HOTELS/RESORTS

Biras Creek Hotel
P.O. Box 54
Virgin Gorda, BVI
(809) 49-55455

Bitter End Yacht Club
P.O. Box 46
North Sound, Virgin Gorda, BVI
(809) 49-42746

Fischers Cove Beach Hotel
P.O. Box 60
The Valley, Virgin Gorda, BVI
(809) 49-55252

Guavaberry Spring Bay
P.O. Box 20
Virgin Gorda, BVI
(809) 49-55227

Leverick Bay Hotel
P.O. Box 63
Virgin Gorda, BVI
(809) 49-55450

Little Dix Bay Hotel
P.O. Box 70
Virgin Gorda, BVI
(809) 49-55555

Ocean View Hotel
P.O. Box 66
Virgin Gorda, BVI
(809) 49-55230

Olde Yard Inn
P.O. Box 26
Virgin Gorda, BVI
(809) 49-55544

Tradewinds Resort
P.O. Box 64
Virgin Gorda, BVI
(809) 49-43151

owned by Lowell and Vivian Wheatly, is the only hotel on the island. The main dinner feature is fresh lobster and other seafoods grilled over an open fire and the small thatched beachside bar offers the main source of entertainment.

The two Bertrams, the 31 foot *Dayang* and 21 foot *Southwind*, can serve up to 12 divers comfortably. Dive sites include shallow reefs with caves and ledges, the *Rocus*, *Paramatta* and numerous ancient wrecks with cannons, anchors, ballast stones and other artifacts.

OTHER ISLANDS

Tiny Mosquito Island (often misspelled "Mosquito"), close to Virgin Gorda's northern shore, is owned exclusively by Drake's Anchorage. Here, a maximum of 30 guests can enjoy three miles of shoreline and hiking trails. Ten breezy, double pine bungalows with private porches and two exquisite villas (complete with stereo, books and chess sets) are available.

Marina Cay is just north of Beef Island. The Marina Cay Hotel has 12 double rooms, restaurant, bar, a private beach and terrace. At Peter Island, the Peter Island Hotel and Yacht Harbor has 32 air-conditioned rooms and activities range from horseback riding to watersports.

HOTELS/RESORTS ON OTHER ISLANDS

Anegada Reefs Hotel
Anegada, BVI
(809) 494-3425 (Marine Radio Operator)

Peter Island Hotel and Yacht Harbour
P.O. Box 211
Road Town, Tortola, BVI
(809) 49-42561

Drakes Anchorage
(Moskito Island)
P.O. Box 2510
Virgin Gorda, BVI
(809) 49-42254

Marina Cay Hotel
P.O. Box 76
Road Town, Tortola, BVI
(809) 49-42174

White Bay Sandcastle
(Jost Van Dyke)
P.O. Box 7174
St. Thomas, USVI 00801
(809) 49-42462

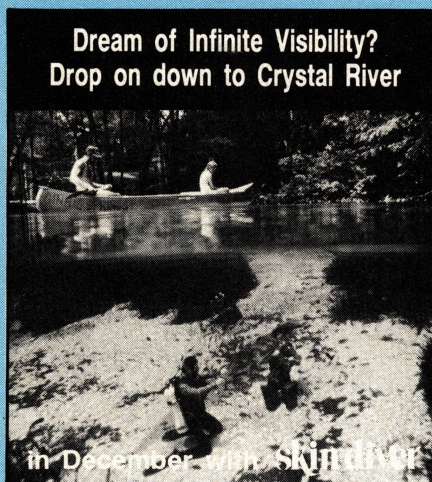
Guana Island Club
P.O. Box 32
Road Town, Tortola, BVI
(809) 49-42345/U.S. (914) 967-6050

Windsurfers, motor dinghies, trips to beaches and Road Town and other services are available. The least expensive Virgin Gorda hotel is Ocean View Hotel, with EP doubles at \$40 per day.

ANEGADA

If you just want to get away from it all, Anegada is the place to go. Unlike the other BVIs, Anegada is a flat, coral island with a maximum height of 28 feet, covered with low vegetation. This small, three by eleven mile island has a population of 200 or less. You can walk along miles of white sand beaches without seeing another person or even a footprint. Air BVI has morning and afternoon flights on Mondays, Wednesdays and Fridays, between Beef Island and Anegada.

The 12 room Anegada Reefs Hotel,



Dive the best of the B.V.I. on your own personal island

For the sophisticated diver . . . Drake's Anchorage. A small resort hotel located on a privately owned 125 acre island. Paradise featuring gourmet cuisine, secluded bungalows, and access to the best dive sites in the B.V.I. All other water sports available. Special dive packages and reduced rates for groups of 20-30.

Write:

Drakes' Anchorage
P.O. Box 2510
Virgin Gorda, BVI
or 809-494-2254 for
reservations or information

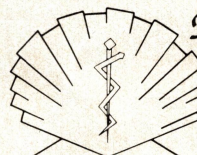


circle #133 on Reader Service Card

Dive The British Virgin Islands

with renowned treasure diver
BERT KILBRIDE

KILBRIDE'S
Underwater Tours
P.O. Box 40
Virgin Gorda, B.V.I.
(809) 494-2745



PHYSICIANS
The most luxurious expedition
in diving medicine
PETER ISLAND, B.V.I.

Medical Seminars, Inc.
11107 Wurzbach, #204
San Antonio, TX. 78230
(512) 690-1005

BVI

LIVE-ABOARD DIVE BOATS

Another way to dive the BVIs is from a live-aboard dive boat such as *Lammer Law*, *Misty Law* or *Tropic Bird*. Each of these has a compressor, an adequate supply of tanks and diving gear and provides certified divemasters. Meals are included, and resort courses and instruction can be arranged.

Lammer Law is a 95 foot trimaran. Captained by John Delorey, *Lammer Law* takes 6-18 divers on seven and ten day dive/sail cruises. *Lammer Law* is indeed luxurious. The main saloon, with stuffed sofas and chairs, has the atmosphere of a comfortable living room rather than that of a dive boat. The staterooms are spacious and each has a private head.

In addition to the regular sites, *Lammer Law's* dive sites include Mystery Anchor, an 80 foot dive with abundant fish and Rinse Bullocks, on the Atlantic side.

Misty Law was the first live-aboard dive boat to operate in the BVI, thus her captain knows a lot of unique sites. The 56 foot trimaran, captained by David Parker, offers one and two week sail and dive

cruises for four to eight divers. Since it is smaller than *Lammer Law*, the groups are smaller and thus more intimate. Both *Misty* and *Lammer Law* often extend their diving range to areas beyond the BVI such as St. Martin. Dive sites include Round Drive, a 90 foot dive to a compact site of prehistoric coral loaded with life; Grand Central, the largest U/W cavern in the BVI and Robert Reef, an unspoiled shallow reef 50 miles out to sea.

M/V *Tropic Bird* is a 98 foot motor vessel with the sleek lines of a German E-boat. She accommodates up to 24 divers in 12 large double staterooms below decks, with five full sized heads and a sauna. The bar and lounge is forward, just aft the tank storage on the foredeck. The galley is amidships and the entire after half of the main deck is devoted to the spacious aft saloon where you can enjoy color video movies and the aft deck where divers enter and leave the water. While not a luxury boat, it certainly offers a lot of diving for your dollar.

Guided by skipper Mike Bloss, *Tropic Bird* dives the *Rhone*, Ring Dove and many other sites. At Vanishing Rock, you'll find an abundance of pillar coral and coral ledges with plenty of tropical fish. At *Haulover Bay*, the bottom is dotted with coral heads and rays are common to the area.

For groups of 6-12 less serious divers, for whom food and leisure may be more important than diving, write for a *Wanderlust* brochure. This luxury trimaran, with a crew of six (including two chefs), delivers lots of service as well as leisurely diving.

BVI DIVE SITES

The essence of BVI diving is variety. You name it—caves, canyons and caverns lined with colorful sponges and cup corals, seamounts surrounded by schools of fish, shallow, calm reefs loaded with tiny marine creatures or even an historic shipwreck—and a BVI dive operator can take you to it.

Anegada Reef is actually hundreds of sites. It has claimed over 300 ships from the early 1500s to the 1980s. Wherever you dive here, you suspect that every stone is ballast and every strange shape in the coral must be a piece of covered wreckage. Wreck fever takes over as you start fanning the bottom, hoping to be that one diver who uncovers a fortune in gold.

As you approach **Blonde Rocks**, you can see the blonde encrusting firecoral on top of the rocks just 10 or 15 feet below the surface.

The Chicuzen is a 246 foot refrigerated ship that sank in 75 feet of water north of Tortola in 1981. An intact, steel-hulled ship, she is starting to attract large fish. A cloud of barracuda hang just above her hull and a 14 foot manta ray has been seen nearby.

The Chimney, at **Great Dog**, is composed of three canyons, from about one to 40 feet deep. As you swim along the

northern canyon, you enter a large tunnel that leads to an opening in the ceiling, the chimney.

Dry Rocks East has rocks awash with surf as well as large submerged rocks in shallow water and down to 85 feet. Most of the action is at the edges of the pinnacle, where there is often a current.

The Indians are good for both tour divers and creature lovers. These four pinnacles of rock, reminiscent of Indian sentinels, overlook a shallow lagoon with a sandy bottom and rocky ledges that support elkhorn corals.

BVI DIVE OPERATORS

Anegada Reefs Hotel

Anegada, BVI
(809) 776-8282

Aquatic Centres

P.O. Box 108
Road Town, Tortola, BVI
P.O. Box 850
Valley Forge, PA 19482
(800) 345-6296; in PA (800) 362-5255

Blue Water Divers

P.O. Box 437
Road Town, Tortola, BVI
(809) 49-42874

Dive BVI

P.O. Box 1040
Virgin Gorda Yacht Harbour, BVI
(809) 49-55513, day; 49-55519, night

Underwater Safaris

P.O. Box 139
Road Town, Tortola, BVI
(809) 49-43235; USA (800) 535-7289

Kilbrides U/W Tours

P.O. Box 40
Saba Rock, Virgin Gorda, BVI
(809) 49-42746

Painted Walls are named for their dazzling colors. Each time you head for one patch of color with your close-up camera, you see another patch that looks even better and then another that is brighter or better composed. The number of potential subjects is so great that you'll find it difficult to make a choice.

The **RMS Rhone** is one of the most impressive shipwrecks in the Caribbean. This 310 foot, steel-hulled Royal Mail Steamer broke her back on the rocks of Salt Island during a violent hurricane in 1867. Today she is a protected sanctuary for marine life and friendly fish.

Rhone Reef is just around the corner from the *Rhone*, at the southeast tip of Salt Island. It begins at the rocks jutting up through the surface and reaches down to more than 40 feet.

The **Anchor of the Rhone** lies on a sedimented reef, 50 to 60 feet deep, with the flukes parallel to the bottom and the iron stock pointed up to the surface.

LIVE-ABOARD DIVE BOATS

M/V *Tropic Bird*

Scuba Tours, Inc.
P.O. Box G
5 Paterson Ave.
Little Falls, NJ 07424
(800) 526-1394, in NJ: (201) 256-9115

Misty Law/Lammer Law

Trimarine Boat Co., Ltd.
Home Port, St. Thomas, USVI 00801
(800) 648-3393

Wanderlust

P.O. Box 5157
St. Thomas, USVI 00801
(809) 494-2405

Sail and Dive the Virgins
on your chartered yacht.

UNLIMITED DIVING!

DELUXE STATEROOMS
GOURMET MEALS OPEN BAR
WINDSURF - WATERSKI
ALL GEAR PLUS COMPRESSOR

8 DAYS/PER PERSON
\$700 - \$900
PLUS AIRFARE

CALL FREE TO
VIRGIN ISLANDS

800 524-2005

VIRGIN ISLANDS SCUBA/SAIL CHARTERS

Box 10966 • St. Thomas • U.S.V.I. 00801 (809) 776-2860

circle #134 on Reader Service Card

BRITISH VIRGIN ISLANDS



UNDERWATER SAFARIS... A COMPLETE CARIBBEAN DIVING FACILITY

Guided dive tours — instruction — rental sales and service — 3 air fill stations underwater photo center — E-6 Processing Hotel/Dive and Sail/Dive Packages Located dockside, adjacent to restaurant, pool and rooms. Bob and Gail Stafford Owner/Operators.



the

moorings/mariner inn

THE BVI SAFARI HOTEL/DIVE PACKAGE

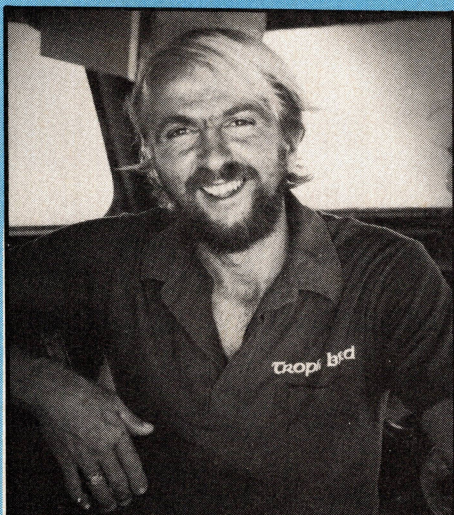
7-nights Moorings Mariner Inn — 6 days diving — breakfast each morning — 2 dinners at the Inn — arrival Rum Punch Party — taxi to and from airport — all taxes and tips

\$525/Person (dbl) Apr. 16th - Dec. 21st

Ask about our B.V.I. Safari Sail/Dive Packages (Bareboat or Crewed)

809-494-3235 BVI 800-535-7289 USA
P.O. BOX 139, ROAD TOWN, TORTOLA, BRITISH VIRGIN ISLANDS

circle #135 on Reader Service Card



F.T.Shane

Captain Mike Bloss, M/V Tropic Bird

ANCHOR OVER THE B.V.I. Motor Vessel Tropic Bird

TROPIC BIRD is the largest and most renowned live-aboard dive boat in the Caribbean today. With 110 feet on deck, she has 12 double occupancy guest cabins, two salons, 42 aluminum tanks and two compressors, is completely air conditioned and has a convenient rear dive platform.

Aboard the **TROPIC BIRD**, we provide a varied itinerary for our guests with positively unlimited diving. You are assured of good diving virtually everyday, as we navigate "on the pond," the calm waters encircled by, and on the leeward sides of, the islands and cays of the B.V.I. Visibility is generally 75-150 feet. In addition, divers and non-divers alike can opt to explore the topside scenery of the islands, one of which is always within easy access by inflatable boat.

With all of the conveniences of a land-based resort, and more, **TROPIC BIRD** has been home to many a film crew, including the **Blue Water/White Death** team as well as to hundreds of satisfied guests. Our professional crew of five has logged thousands of dives in the British Virgin Islands. Living directly over the dive sites is the only way to dive these gin-clear waters. We dive areas that can only be reached by a live-aboard boat. Dive a pinnacle and chance upon a 400-pound Jewfish. Feed tame gray angelfish at the Chimneys. Of course we'll still dive some of the favorites—the Indians, Ring Dove, and we wouldn't miss the **Rhone**. In fact, we often anchor right over her bow.

We give you the most for your vacation dollar. **TROPIC BIRD** represents the best dive vacation value. And, our package is **GUARANTEED**. If you miss a day of diving due to weather, I'll refund the entire package price. *Skin Diver* calls it "maxi-diving with mini-effort." And, our **UNLIMITED** dive package gives you the lowest cost per dive—**ANYWHERE, ANY PLACE!**

Weekly departures are available for divers booking independently or with groups. Complimentary packages are earned on group bookings and commissions are paid to dive stores and travel agents. Our toll free numbers put you in touch with knowledgeable reservations agents, who will make complete airline and boat arrangements.

A specially low-priced airfare is available from your city of departure to Tortola, exclusively with the **TROPIC BIRD** package. Major U.S. carriers provide frequent service to San Juan from most cities with connecting flights to Tortola on **AIR B.V.I.**, the international airline of the B.V.I. For reservations and information contact **Scuba Tours** at 800/526-1394, our U.S. representative; or our new Virgin Islands representative, **Easy Adventures** at 800/524-2027.

Advertisement

Unlimited Diving... Unlimited Value!



- Guaranteed Diving
- Lowest Cost Per Dive
- Unlimited Value



Amy D. Brown

**Special Air Fares
for the Tropic Bird
Via AIR B.V.I.
and all major carriers.
Call for lowest fares.**

98-foot Motor Vessel Tropic Bird
Unlimited diving in the British Virgin Islands

Guaranteed Diving and Lowest Cost Per Dive!

Your 8 day/7 night Tropic Bird dive vacation gives you the absolute best dive package in the British Virgin Islands... and you live right on top of some of the most exhilarating dive sites in the world, including the wreck of the R.M.S. Rhone **AND**... the Tropic Bird gives you the lowest cost per dive on either a live-aboard boat or hotel-land based operation. Captain Mike Bloss **GUARANTEES** "if you miss any diving days because of weather, your package price will be refunded." The Tropic Bird's **UNLIMITED** Dive Vacation Package includes: six days of diving—an average of 5 dives a day, including night diving, all meals, wine with dinner, double a/c staterooms, full crew and dive masters, sauna, sun decks, aft salon, bar, stereo, video movies, island tours and sunfish sailing... *all for under \$23.00 per dive, based on 30 dives per week.*

WEEKLY DEPARTURES - 8 days / 7 nights - FROM TORTOLA, B.V.I.

- Individuals, Groups & Charters
- Dive Stores, Travel Agents & Groups Commissionable
- Group Leader receives complimentary package(s)
- PADI one-week full certification courses
- Special LOW roundtrip airfares and reservations

Call Toll-Free for Color Brochure, Reservations & Airfares

800 / 526-1394 OR 800 / 524-2027
IN NJ 201 / 256-9115

©Copyright, 1984 Frank T. Shane

SDM travel

SECTION

During the past few years Spanish Cove Resort, situated along Grand Cayman's quiet north coast, has developed in both facilities and reputation and now ranks as one of the premier dive travel destinations in the Caribbean. For a time, however, there was a degree of uncertainty as to the future of the resort because of factors totally unrelated to diving.

Spanish Cove was owned by Northwest Energy, a petroleum and pipeline company based in Salt Lake City. A similar business, the Williams Company, acquired certain assets of Northwest Energy, including Spanish Cove, in a stock tender offer. This is relevant only because the Williams Company had no intention of remaining in the dive business and sought to sell the property, preferably to an entrepreneur experienced in dive operations. Peter Hughes had been involved from the very early stages as supervisor of dive operations and when the dust finally settled, Peter Hughes and prominent Miami attorney Jack Peeples emerged as the new owners of both the hotel and dive operation.

For the diver considering Spanish Cove Resort for a vacation these developments are important. In just under two years this resort has experienced a transformation from dive industry albatross to Caribbean bird of paradise and the continued involvement of Peter Hughes and added expertise of Jack Peeples will assure that the evolution will continue.

During 1983 an additional 26 deluxe rooms were completed, increasing the number of air-conditioned rooms to 47 and more than doubling the capacity of the resort. The dive shop was also upgraded with additional equipment, a new 50 cfm diesel

SPANISH COVE

Cayman's Most Elegant Dive Resort

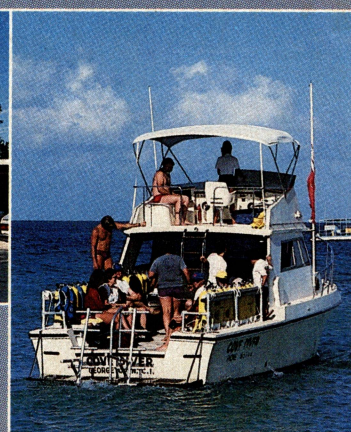
BY BARBARA A. CURRIE

compressor and more, experienced staff members.

Two new boats have been added to the fleet. The newest is 39 foot fiberglass deep V-hull, christened *Spanish Diver*, an upgraded replacement to

to work diligently to provide guests with the best of both worlds, above and below the surface. The latter part is easy given the resort's location along Grand Cayman's northern iron-shore. The North Wall is just minutes away, offering a plethora of drop-off dives acclaimed as some of this hemisphere's best. Proximity to fine diving, combined with the precision of dive services, means guests will experience the maximum number of dives within the constraints of safety.

There is more to Spanish Cove than just diving, and while this is the primary interest of most guests, the non-diver will find an equally rewarding vaca-



photos/Barbara Currie

the venerable flattop of the same name. The *North Wall Diver*, also a V-hull diesel, 38 feet long, was designed specifically for diver convenience and comfort by Peter Hughes and dive operations manager Harry Ward. These two vessels join *Cove Diver* and *Treasure Diver* as part of Grand Cayman's most modern dive fleet. As a complement to the expanded flotilla, an extensive breakwater and additional dock allow for easy guest access to the boats and simplified entry for shore dives.

The Spanish Cove team continues

tion. There is a small, sheltered beach directly in front of the resort and an adjacent freshwater swimming pool for sunbathing. Tours of the island can be arranged with Tropicana Tours through the front desk. Deepsea fishing and native beach picnics with local fishermen are among the numerous activities which may be arranged by the Spanish Cove staff.

travel

The amenities are part of the unique charm and appeal of the Cove. All rooms in the original section have been refurbished and offer the same standard of quality as the 26 new rooms. In addition to traditional guest rooms featuring two double beds, Spanish Cove now offers several deluxe suites in the new wing, ideal for groups to use as hospitality centers or for private parties.

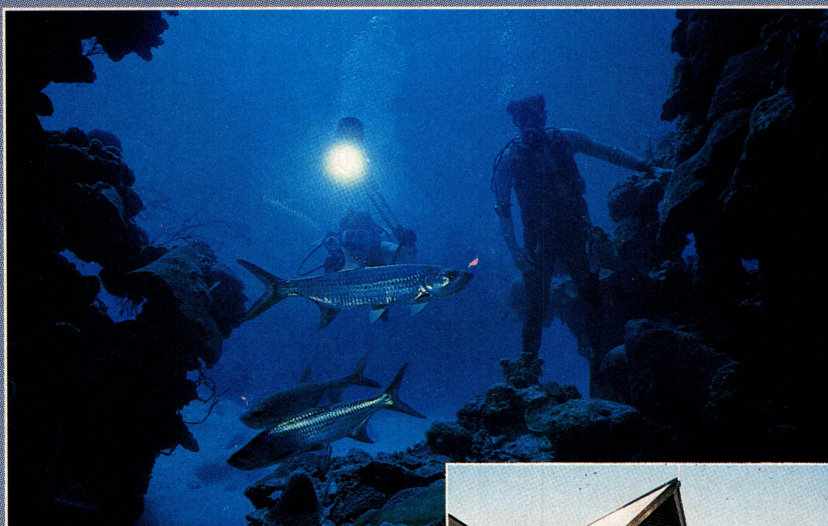
The courtyard has been recently and completely landscaped. The main building, a striking edifice of native coral stone, offers a well appointed dining room with excellent cuisine downstairs and a comfortable and unusually decorated Aquarium bar upstairs, alongside the resort's wide screen video which shows popular movies and U/W video productions.

Casual dining on the wooden patio veranda is popular during all three meals and the pool bar attracts an interesting local cast of West Bay residents and Grand Cayman ex-pats each evening. Stories of fine diving and special experiences are a daily accompaniment to the spectacular sunsets typical of this island.

Fine accommodations and excellent dining options were complemented by the addition, in December 1983, of a chic collection of fashion and accessory temptations in the Spanish Cove boutique, adjacent to the scuba center. The unusual selection of gifts and indulgences reflects the exquisite taste of Alice Hughes. Alice handles the purchasing for both the boutique and dive shop, stocking one of the most creative lines of T-shirts and casual wear you could hope to find, in addition to a variety of dive accessories and retail gear.

The expansion and renovation of existing guest facilities ashore has been matched by improvements to dive operations services under the careful supervision of Peter Hughes. Harry Ward, an FIT graduate and veteran of several years in the Cayman dive industry, was recruited to head the Spanish Cove dive operations as resident manager in June 1983 and now supervises a staff of six NAUI/PADI instructors and two divemasters.

The goal of the dive staff has been



photo/Barbara Currie

photos/Gen. Murphy

to create hassle free services for the guests. The guest storage area adjacent to the boat ramps has been expanded and provides ample space for hanging gear between dives. New compressor facilities, including the massive 50 cfm diesel with back-up compressors and air storage, will efficiently service the resort's 250 aluminum tanks. Complete rental outfits for an additional 20 people were added, including BC jackets with power inflators and regulators with depth/pressure gauges and octopuses.

In addition to morning two tank dive trips and one tank afternoon dives, there are night dives and unlimited access to the excellent reefs just offshore the beach or breakwater.

The Spanish Cove program also includes complete PADI/NAUI open water certification classes, scuba review, resort courses and underwater photography courses.

The Spanish Cove photo center is among the most sophisticated operations in the Caribbean and offers guests the opportunity to discover a new and exciting aspect of the underwater world. Resident pro Jerry Schnabel offers a variety of custom services including personalized underwater videotape sessions, under-

water portraiture and complete instruction in either still photography or video. Anyone with any reservations about the qualifications of Schnabel need only view his weekly slide show, compiled with the excellent modeling and photographic assistance of associate Susan Sweigert, to appreciate the talent and sensitivity of this accomplished pair.

Spanish Cove offers divers access to the best of Grand Cayman's underwater world. If weather prevents comfortable North Wall diving they simply shift west or south... you won't be left high and dry at this resort.

The North Wall, with its magnificent vertical drop-off overgrown with deep water gorgonians, black coral trees and an artist's palette of colorful sponges, offers too many dive sites to mention. Probably the most famous is legendary Tarpon Alley, immortalized by Stan Waterman in his 1984 production for Spanish Cove, *Off the Wall*. The site, a 20 minute ride from Spanish Cove, is a system of crevasses in the reef which run perpendicular to the wall at 50-80 feet and provide year-round refuge for a large school of three foot tarpon, occasional sharks and numerous stingrays. But, just as unusual are many other sites which

(Continued on Page 74)

SPANISH COVE GRAND CAYMAN ISLAND B.W.I.

First Class



IN THE WATER OR OUT

DIVE the fabulous North Wall off Grand Cayman Island

DINE on gourmet cooking at the seaside restaurant

ENJOY exclusive, luxurious accommodations

RELAX in the fresh water swimming pool, at
the poolside bar, water skiing, wind
surfing, sailing, bicycling, deep sea
fishing or playing volleyball



*Spanish Cove,
In A Class By Itself*

**In U.S. toll-free 800-231-4610: Outside U.S.A. and in FL call 305-854-5444
or write 2699 S. Bayshore Dr., Suite 700E, Coconut Grove, FL 33131.**

A full-service NAUI/PADI training facility All new equipment, boats and marina

circle #137 on Reader Service Card

UNLIMITED FUN IN THE SUN



Above: Divers enjoy fresh pineapple aboard the *Dolphin One*. Such touches are one reason Divers Unlimited has grown into prominence. **Right:** The *Dolphin One* is only half of the DU fleet.



**TEXT AND PHOTOGRAPHY
BY STEVE LUCAS**

The aroma of freshly sliced pineapple quickly jolted the salty crust from my sense of smell. The sweet scent of the fruit was on the breeze as Divers Unlimited's Dave Stancil sliced the fruit for his guests. As everyone aboard started for the bow, I couldn't help thinking, what a classy way to end a dive. But then, doing things with that extra swirl is nothing new

at Divers Unlimited. That is precisely what has made this Hollywood/Fort Lauderdale, Florida operation one of the most prominent in North America.

DU has long been known by its customers as a "department store" of diving. If a diver is looking for a particular piece of equipment or service and cannot locate it in the Divers Unlimited main

store in Hollywood, it is a good bet it may not be found anywhere. Dave Inman, owner of DU once told me, "You have to train, maintain and entertain" divers to be successful in this business. Inman's organization lives every line in his rhyme.

As a diver training facility, DU has been recognized in the industry year after year as one of the largest and most success-



Above: A diver with a pufferfish off Ft. Lauderdale. Right: The Days Inn Ft. Lauderdale Surf Hotel, directly opposite the beach. Divers Unlimited is housed on the main floor. Below: The hotel's pool area.



ful, issuing certifications from open water to instructor. The size and quality of inventory is testimony to Inman's desire to maintain those people he and his staff have trained. The final line, entertain, is one part he puts great emphasis upon.

In addition to the Divers Unlimited resort facility at Marathon in the Florida Keys, DU maintains and operates a com-

plete dive travel agency from its main center. Divers are regularly encouraged through a monthly newsletter called Scuba Scuttlebutt to join trips to one of the several resorts in the Caribbean which DU represents, as well as frequent outings in Marathon. In Ft. Lauderdale, students and vacationing or local divers have regularly been offered scheduled

reef trips to the outstanding dive areas that can be found near Lauderdale and Hollywood's shores (SDM, May '84). One of the two Divers Unlimited boats, *Dolphin One* or *Diversion*, has been regularly assigned to these waters for several years, with the other boat doing alternate duty in the Keys. Although DU's clients have been offered an excellent base facility, it has always been quite a distance from the boat. Now that has changed.

Directly opposite famous Lauderdale beach on the A1A "Strip," Divers Unlimited has opened a complete beach dive operation on the main floor of the Days Inn Ft. Lauderdale Surf Hotel. A complete sales, rental, instruction facility, the store is in one of the best situated hotels on the beach. With a large, elevated pool deck overlooking the ocean, the hotel is near the Bahia Mar Yacht Club with its deep-sea fishing fleet. Only a few blocks away are the chic shops of Las Olas Boulevard and the beach is only yards from the hotel door. The new store is the base for DU's complete charter dive operation. With its dock directly across the street, adjacent to the Swimming Hall of Fame and Coconuts, one of the Divers Unlimited boats, normally the 40 foot *Diversion*, runs local reef and wreck trips daily.

The DU staff has been specially trained and geared to ensure guests a comfortable outing. In addition to the pineapple sharing ritual after each dive trip, all guests are treated to soft drinks from a help-yourself cooler onboard. Hotel guests have the option of having their equipment ferried to the dock via an electric shuttle cart, making lugging dive gear a forgotten chore.

With several years' experience working these reefs, the crew of the DU boats have located an excellent assortment of dive sites. One of the best is approximately a mile offshore, near Commercial Boulevard. A group of ledges and old reef breaks rise suddenly from the sandy floor with reliefs of up to ten feet. The average depth is from 40 to 60 feet, making it an ideal area for maximum bottom time on a two tank trip. The crevices are home to several dozen varieties of reef creatures. Lobsters are very common.

To celebrate the opening of the new Ft. Lauderdale beach resort operation, DU offered a summer dive special of only \$10 per person, per two tank trip, excluding equipment. The offer will be continued several weeks into the fall. Tank rental is available for a reasonable fee.

For information about the new Divers Unlimited/Days Inn Ft. Lauderdale Surf Hotel resort, as well as Du's other operations, plus to have your name added to those who already receive Scuba Scuttlebutt, write: Divers Unlimited, 6023 Hollywood Blvd., Hollywood, FL 33024. Outside Florida telephone (800) 327-2740. In Hollywood call 981-0156. In Ft. Lauderdale call 524-4862. 

DON FOSTER'S DIVE GRAND CAYMAN

Your Personalized Dive Resort!

**CUSTOMIZE YOUR DIVE VACATION FOR AS
LITTLE AS THREE NIGHTS OR A
COMPLETELY UNLIMITED STAY.**

**3 NIGHTS/4 DAYS \$209.00 PER PERSON DOUBLE OCCUPANCY
7 NIGHTS/8 DAYS \$499.00 PER PERSON DOUBLE OCCUPANCY**

Package Includes (Hotel)

- air conditioned accommodations (with dive guarantee)
- full american plan breakfast daily
- use of hotel pool, chaise lounges and towels
- all taxes and gratuities for hotel and breakfast plan
- admission to Royal Palms entertainment and dances
- Managers Rum Punch Party (Mondays).

(Diving) 7 night package

- guaranteed /unlimited diving
- 6-2 tank boat dives
- 1-night (boat) dive
- Unlimited airfills for offshore diving
- Back pack, weights, & belt, tanks
- A Don Foster Dive Grand Cayman T-Shirt

800-526-1394

IN NEW JERSEY 201-256-9115

SCUBA TOURS INC.

SERVING DIVE SHOPS, CLUBS, TRAVEL AGENTS AND INDIVIDUALS



**GUARANTEED DIVE PACKAGES
AVAILABLE FOR THE SUMMER
'84. SOME RESTRICTIONS
APPLY FOR DETAILS
CONTACT OUR U.S.
REPRESENTATIVE**



circle #138 on Reader Service Card

SPANISH COVE

(Continued from Page 70)

Cove divemasters have discovered and named; pristine reefs held in reserve for their guests. The resort's slogan, "In a class by itself," extends to the quality of the dive operation as well as topside amenities. This is a group of dedicated and enthusiastic professionals constantly seeking new dive sites and improved diver service.

The maturation of Spanish Cove as a world class dive resort over the past two years has been exciting to watch. The addition of a large conference center directly connected to the photo center has made the resort popular with both individual divers and large groups such as the Human Underwater Biology programs. The new boats and compressors, new rooms and, most importantly, the dedication to quality demonstrated by the new owners, Peter Hughes and Jack Peebles, will assure Spanish Cove a continued position of prominence among Caribbean dive resorts.

For further information or reservations, please contact: Spanish Cove, 2699 South Bayshore Drive, Suite 700E, Coconut Grove, Florida 33131 or phone toll free (800) 231-4610, from Utah phone (801) 534-3102. 🌿

KISSINGER JOINS PDIC

Paul Kissinger, director of diving operations for DePalm Tours, Aruba, Netherlands Antilles, has joined the staff of Professional Diving Instructors Corp. (PDIC) as instructor trainer.

DePalm Tours is a complete PDIC training facility offering training at every skill level from the resort course through dive supervisor. It will now offer regularly scheduled instructor training courses.

Kissinger's diving experience includes both inland lake and ocean diving and his teaching career spans 33 years. For a listing of PDIC facilities contact PDIC, P.O. Box 772, Scranton, PA 18501. 🌿

LA PAZ BAREBOATS

Stevens Yachts, Inc. of Annapolis, MD has established its fourth bareboat charter location at the Marina Gran Baja in La Paz, Mexico. Ten new 40 foot trawlers are available.

The twin diesel powered vessels are air-conditioned, carry 500 gallons of fresh water, accommodate six in three private cabins and have two enclosed heads with showers.

The on-board generators are capable of powering air compressors for divers. The vessels are offered with provisioning and supplies.

Custom 40 and 47 foot cruisers for up to eight passengers are also available at the La Paz location. 🌿

Susie Powell

**"They tells me 'Susie,
we just don't wants to go home.'"**

"They just loves it here. And no wonder. Everyone is just so friendly. I mean, you walk up, I have a screwface on, you just don't feel so good about coming in. But that never happens here. At Bob Soto's we do whatever it takes to make your dive vacation the best it can be. Adventurous yet safe

a.m., p.m., night and North Wall diving. All at reasonable prices in the warmest, clearest water and the best reefs and

RON KIPP'S



wrecks in the world. Right here in the Caymans.

"And you know, when the people do go home, me and those people, we the best of friends."

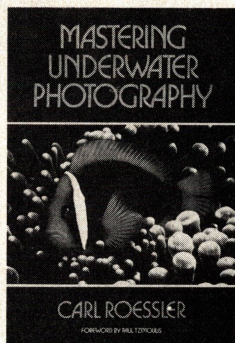
We take your fun very seriously

P.O. Box 1801 Grand Cayman, BWI Tel. (809) 949-2022

circle #139 on Reader Service Card

THREE GREAT NEW BOOKS BY CARL ROESSLER

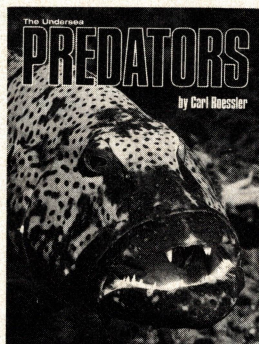
FOR YOUR PERSONAL LIBRARY OR AS VALUABLE GIFTS



Mastering Underwater Photography

(William Morrow, N.Y.)
With introduction by Paul Tzimoulis.
112 pages, 40 color photos
6 x 9" Format

In this highly readable book, the master fish photographer shares his techniques for taking better photographs underwater. Equipment, lighting, plus secrets of photographing stationary subjects, large pelagics, underwater models and elusive fish are all covered concisely and with lavish illustrative photos in full color.
Hard Cover Edition \$12.95



The Undersea Predators

(Pisces Books, N.Y.)
192 pages, 200 color photos
8½ x 11" Format
Publication October

This lavish coffee-table book distills Carl Roessler's years of observing marine creatures into a spectacular panorama. Predation, the sea's endless hunt, is the engine that drives life in the undersea community. Brilliant photos offer you intimate portraits of unexpected, startlingly beautiful predators in all the world's seas. A priceless addition to any diver's library!
Hard Cover Edition \$24.95
Deluxe Edition \$45.00



Diver's Guide To The Cayman Islands

(Pisces Books, N.Y.)
96 pages, over 75 color photos
6 x 9" Format
Publication October

A concise but beautifully photographed guide to the greatest dive sites of the Cayman Islands. Indispensable for planning your trip to this popular Caribbean dive mecca.
Paperback Edition \$8.95

**LOOK FOR THESE GREAT NEW BOOKS IN YOUR BOOKSTORE
OR USE THIS HANDY MAIL-ORDER COUPON**

YES! PLEASE SEND ME CARL ROESSLER'S:

Quantity

_____ Mastering Underwater Photography	@ \$12.95 = \$	_____
_____ Diver's Guide to the Cayman Islands	@ \$8.95 =	_____
_____ The Undersea Predators (hardcover)	@ \$24.95 =	_____
_____ or deluxe boxed edition	@ \$45.00 =	_____
	Postage and Handling =	2.50
	Subtotal =	_____
Special Bonus: For each complete set of all three subtract 10% =		_____
	Subtotal =	_____
California orders add 6½% =		_____
	TOTAL =	_____

Please allow 6-8 weeks for delivery
(Publication date for The Undersea Predators
is October 1984.)

Mail this coupon to:
Sea Images
680 Beach St. #340
San Francisco, CA 94109

BAHAMAS

NEAL WATSON'S

BIMINI^{or} ANDROS

UNDERSEA ADVENTURES

Two of the Finest Diving Destinations in the Entire World...

Depart Ft. Lauderdale. For Bimini: Come or leave any day. Stay as many days as you like. For Andros: Departures Friday, Saturday, Sunday & Monday (Minimum 4—Tuesday, Wednesday & Thursday)

NOW YOU HAVE A CHOICE OF TWO EXCITING ALL-INCLUSIVE DIVING PACKAGES INCLUDING ROUND-TRIP AIRFARE

BIMINI STANDARD

3 Days As low as **\$285***
2 Nights as per person double (includes 8 dives)

BIMINI DELUXE

3 Days As low as **\$355***
2 Nights as per person double (includes 8 dives)

Standard 8 Days/7 Nights

\$660* per person, double (includes 23 dives)

Deluxe 8 Days/7 Nights

\$895* per person, double (includes 23 dives)

INCLUDES: Round-trip Airfare

• Transfers to and from Airport

• Air-conditioned accommodations

• Deluxe: Gourmet Breakfast and Dinner Daily

(MAP) • Free Tennis • Fresh Water Pool • Standard: 3 Meals Daily • All Gratuities.

Now overnight E-6 Color Processing available.

ANDROS BEACH HOTEL & VILLAS

3 Days As low as **\$385***
2 Nights as per person double (includes 7 dives)

8 Days/7 Nights as low as **\$825*** per person, double (includes 22 dives)

INCLUDES: Round-trip Airfare • Transfers to and from Airport • Deluxe Oceanview Accommodations • Breakfast, Lunch,

Dinner Daily • 3 Dives Daily except 2 on day of arrival and departure • Diving Equipment

• All room taxes and gratuities.

*Does not include U.S. or Bahamian Departure Tax.



Neal Watson's
Undersea Adventures
P.O. Box 21766
Ft. Lauderdale, FL 33335
Telephone (305) 763-2188

TOLL FREE 800-327-8150

Please Send Me More Information and Brochure

☐ Bimini ☐ Andros

Name _____

Address _____

City _____ State _____ Zip _____

BUA112



circle #141 on Reader Service Card

Dive with Sea Sports, Inc.

The Dive Travel Professionals.

- Cozumel
- Bonaire
- Belize
- Australia
- Grand Cayman
- Florida



1100 FM 1960 West, Suite F222, Houston, Tx. 77090
Houston: 353-8466 Texas: 1-800-392-4099 USA: 1-800-821-6557

R/V SEA DRAGON

The R/V *Sea Dragon* is specially equipped for carrying divers to the remote areas of the Bahamas. Accommodations include four private double cabins and separate crew quarters. Two compressors, two generators and 24, 80 cubic foot tanks are aboard. The boat's



skipper, Captain Dan Doyle, is a USCG licensed merchant marine master with 14 years' experience diving the Bahamas out-islands. The chef, Suzanne Ford, is also a USCG licensed ocean operator.

The R/V *Sea Dragon* has a new mailing address: Out Island Oceanics, R/V *Sea Dragon*, 2200 S. Andrews Ave., Ft. Lauderdale, FL 33316.

SPANISH COVE/SOUTH COVE SPECIAL

To celebrate the acquisition of Spanish Cove and South Cove resorts by Peter Hughes Dive Operations, these two Grand Cayman dive destinations are featuring Mates Months through the first week of October. With this offer significant price savings may be realized. When one diver signs up for the unlimited eight day/seven night package at either resort, his/her buddy goes for free.

SOUTHERN CROSS CLUB

Ron and Nancy Sefton now reside on Little Cayman Island where Nancy has been named business manager of the Southern Cross Club, a 10 room resort devoted to diving and fishing.

The Club is on South Hole Sound and has private cottages and a clubhouse arranged along the beachfront. The resort is 12 minutes from the reefs of Bloody Bay and five minutes from the wreck of the *Soto Trader*. Personalized trips, with emphasis on underwater photography and marine life appreciation, are featured. Additional activities include: sailboarding, waterskiing, birdwatching, beachcombing, snorkeling and picnics.

The Seftons also offer a private photo/dive charter service aboard their 24 foot *Triton* and rent out their two bedroom cottage adjacent to the resort.

Stevens Yachts Now Puts The Pleasures Of The Sea Of Cortez Within Everyone's Reach



STEVENS YACHTS ANNOUNCES

the establishment of the only
full-scale charter operation
in the Sea of Cortez, Mexico

THE EXCLUSIVE OPERATION,
with a brand new fleet of 40-foot
trawlers, provides access to
world's most exciting diving
area and cruising ground.

TUCKED INSIDE BAJA

California's peninsula, the
Sea of Cortez is Earth's
youngest sea and its richest
in marine life, offering un-
rivalled variety—remote
islands, deserted fishing
villages, ancient ruins, diving
with sea lions, whale watching.

THE SPECIALLY DESIGNED
vessels accommodate six in three
fully air conditioned staterooms,

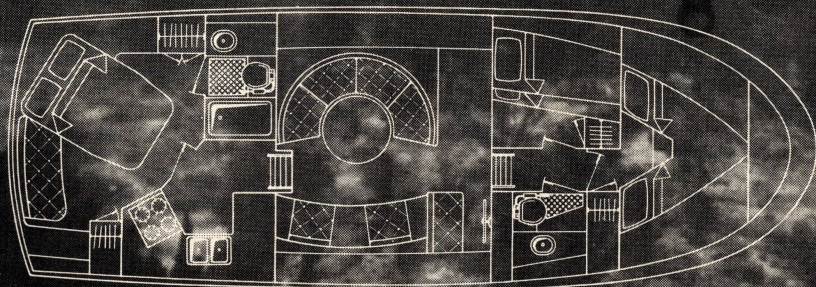
with enclosed heads and
500 gallons of hot and cold water.

DEPENDABLE TWIN DIESELS
for easy maneuvering, 300 gallons
of fuel for extended range, and a
7½ kw generator capable of
powering air compressors.

CONVENIENTLY BASED
in La Paz, with daily flight
service from Los Angeles,
El Paso, Tucson and
Mexico City.

ALSO AVAILABLE, sail-
ing yachts 40 feet in
length and longer.

**WHY NOT CALL
NOW** for more
information and
immediate
bookings?



STEVENS YACHTS, INC.
P.O. Box 129,
Stevensville, MD 21666
Telex 87551. Cable Stevyachts.
800/638-7044 or 301/269-0810



The best costs you less at ...

Anthony's Key Resort

Some offer hotel rooms. We give you private bungalows that touch our clear lagoon. Some offer 2 or 3 dives a day. We give you unlimited diving along Roatan's lush coral canyons. Some have nothing more to offer. We give you three great meals each day, plus windsurfing, sailing, tennis, horseback riding, a new photo center and more. Ours is the most complete dive vacation package in the Caribbean, all for only ...

\$525

One week package,
per person,
double occupancy.



© Stephen Frink



A
PETER
HUGHES
DIVE OPERATION



Anthony's Key Resort, Roatan, Bay Islands.

U.S. Office, P.O. Box 26556, Minneapolis, MN 55426.

U.S. toll-free 800-328-0734 / In Minnesota call 612-546-8461.

circle #143 on Reader Service Card

ABACO, BAHAMAS

Dive from the Elbow!

From the Elbow Cay Beach Inn, you'll thrill to night dives, reefs and blue holes, plus voyages to remote islands for native-style Bahamian cookouts, and Champagne Sunset Cruises. 30 units including 20 spacious guest rooms, 3 cottages, 4 efficiencies (all with private baths) and a fresh water pool. A casual, friendly atmosphere always prevails.

See your travel agent or call toll free U.S. & Canada 800-327-0787, Miami 443-3821. Write: Elbow Cay, c/o P.O. Box 535, Pompano Beach, FL 33061.



circle #144 on Reader Service Card

CAYMAN DIVING LODGE

East End, Grand Cayman, B.W.I.
DON'T LEAVE CAYMAN WITHOUT IT!

- Complete Diving Resort
- Dive the North, South, or East Walls
- Virgin Reefs, Caves, Shipwrecks
- Specialized in Underwater Photography and Video Taping
- Rated as one of the Top Diving Lodges in the world...

Dive packages with everything included:

\$199

Call toll free in FLA 1-800-432-8894

All other states 1-800-327-8223

241 East Commercial Boulevard

Ft. Lauderdale, FLA 33334

circle #145 on Reader Service Card

DIVE FLAG WETSUIT

Henderson Aquatics, in recognition of Captain Don Stewart's efforts to save the red and white divers flag, has presented



him with a specially made wetsuit. The presentation took place at Habitat on Bonaire. The suit is scarlet and has a white diagonal stripe.

FL PRE-PUMPKIN DIVE

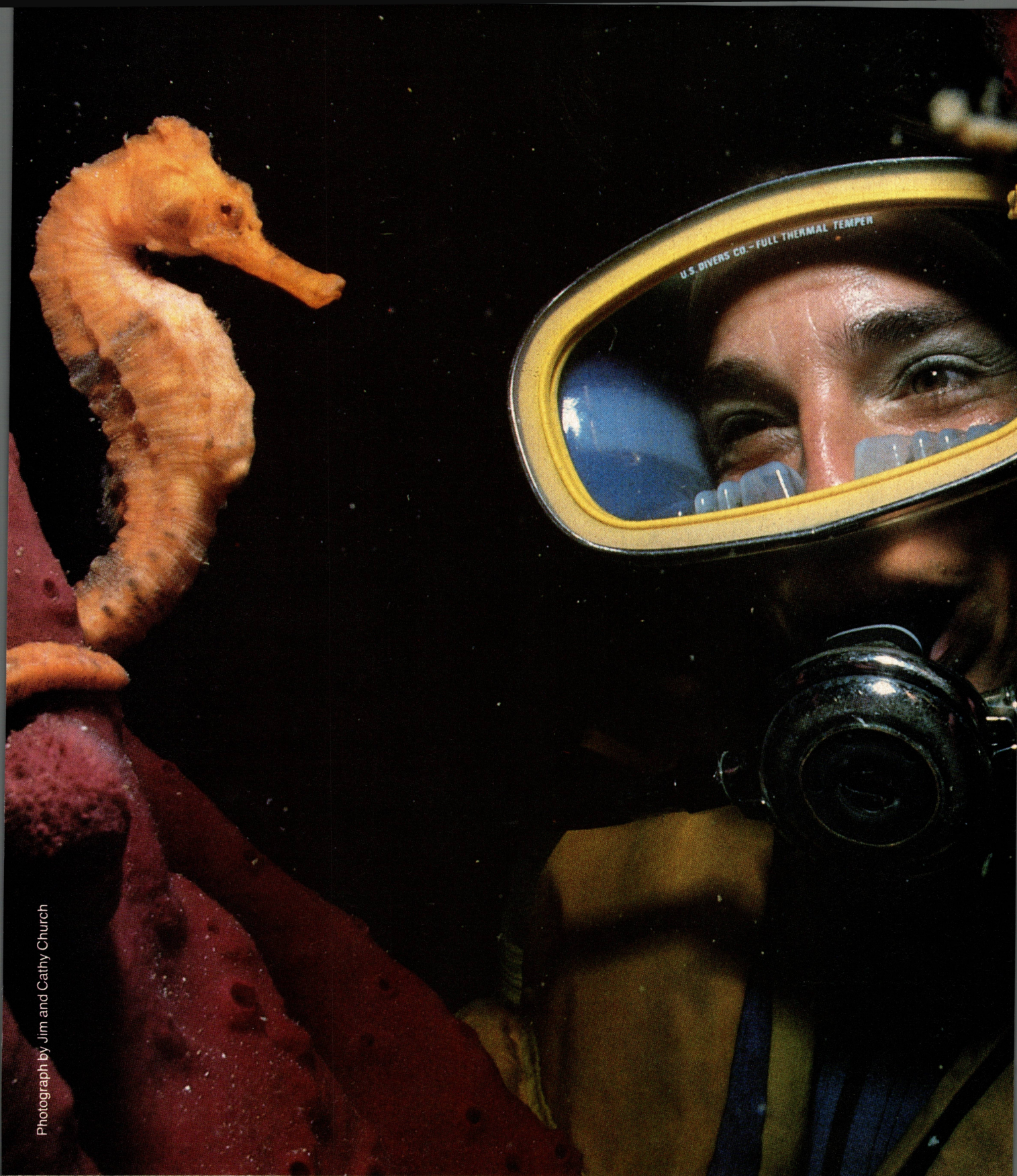
The Keys Association of Dive Operators will host its First Annual Pre-Pumpkin Dive, Jive and Bar-B-Q October 13. The event will include a treasure dive with valuable prizes donated by KADO members and equipment manufacturers, a barbecue and cocktail party to be held at the Coconuts Lounge at the Port Largo Resort, and the premiere of a three projector slide presentation by Stephen Frink promoting the diving available in the Florida Keys. Admission to all festivities, including dives and meal is only \$25 and may be booked only through participating KADO dive shops or by writing to KADO, P.O. Box 1717, Key Largo, FL 33037.

LA MER SLIDE PROGRAM

La Mer Diving Seafari, Inc. is offering a 140 slide program featuring the marine life and exotic dive sites visited by La Mer cruises. The slide program, with written narration, is available for presentation by dive clubs and dive stores at no charge although there is a refundable \$100 damage/loss deposit required. The program takes about 25 minutes. Shorter programs on specific destinations are available.

ALM PACKAGES

ALM Antillean Airlines is offering the Three Free Islands program for Aruba, Bonaire and Curacao. The Free Islands offer provides clients, who are booked on ALM round trip from Miami to either Aruba, Bonaire or Curacao transportation to the other two islands at no extra cost. Additionally, a number of wholesalers and tour operators have created special packages to tie into the program.



Photograph by Jim and Cathy Church

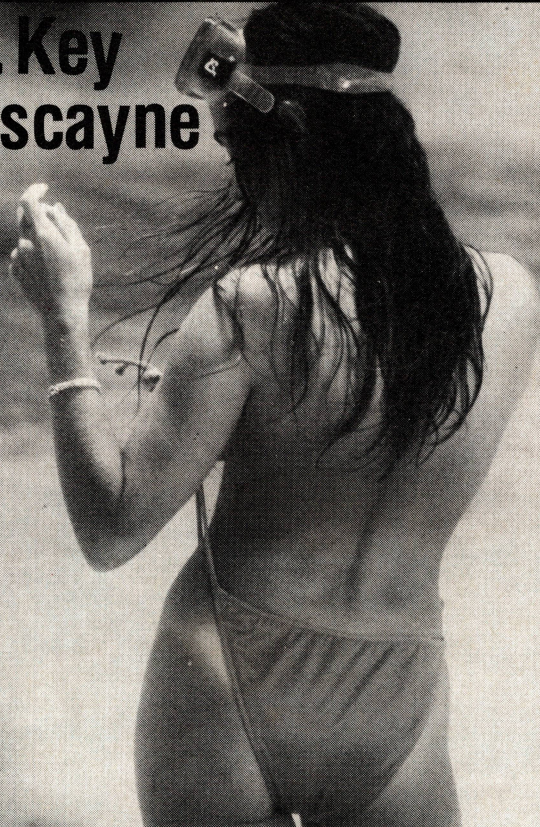
A fantastic variety of excellent dive sites by day. A fantastic variety of restaurants and clubs by night. For a copy of our 24-page Dive Guide, write: United States Virgin Islands Division of Tourism, P.O. Box 471269, Miami, FL 33147

**"...the United States Virgin Islands
have it all."** *Jim and Cathy Church*

circle # 146 on Reader Service Card

Dive Miami's Virgin Island

...Key
Biscayne



Over a dozen intact diveable wrecks! The largest Ghost Fleet of freighters, tugs, and other vessels in North America, many over two hundred feet in overall length and swarming with fish!

The new, custom-built, 53' air conditioned M/V SEA EAGLE is the fastest and largest dive boat on the Key. We can get you to those wrecks, as well as the exciting living coral reefs between Key Biscayne and upper Key Largo, when you are ready!

Our island has tall palms, long, lazy beaches, cool drinks, a pool, and access to sailing, jet-skis, golf, tennis and the night life of Miami

2 Days/1 Night \$89
3 Days/2 Nights \$134
4 Days/3 Nights \$179

*Prices include two dives daily, tanks, air, weights, hotel-double occupancy and welcome drink.
Effective through 12/14/84.

BOAT RENTAL CORP.
3301 Rickenbacker Cswy.
Key Biscayne, FL 33149
(Next to Rusty Pelican)

Call for our
color brochure
(305) 361-6612

photo / Doug Allen



CHRISTMAS ISLAND

Undiscovered South
Pacific Island

BY WARD GRAESSLE

Slipping over the edge, into the depths, nothing but deep, deep Pacific Ocean between us and Hawaii 1,100 miles to the north, we were entering the realm of pelagic fishes known to very few divers. The wall dropped down to more than 3,000 feet. At 15 feet our bubbles began to draw the dwellers of the depths: large manta rays, schools of tuna, turtles, reef sharks, barracuda and schools of ulua (giant crevally) which are so thick they remind you of nighttime insects swarming around a lone light. And, there are the ever present reef dwellers in crevices and caves.

We were diving Christmas Island, the world's largest coral atoll (in land mass). With more than 100 miles of coastline, the possibilities are limitless. Ninety percent of Christmas Island's reefs have never seen a diver and the variety of organisms on the different reefs is beyond belief. Shallow reef snorkeling and diving on the western side of the island, in the lagoon pass adjacent to Cook Island, one finds an aquarium that will delight and amaze the amateur and professional marine biologist alike. Gently sloping bottoms and gargantuan colonies of corals, sponges and large groupers abound on this coast. Farther along, on the northeast shore, along a part of the coast known as the Bay of Wrecks, lies the drop-off men-

tioned earlier. It is a dive that you will carry with you forever. In my 15 years of both pleasure and commercial diving, this is an experience that I've yet to top. Surely, it would be rated among the world's hottest divespots, were it known to those who rank such things.

Being close to the equator, Christmas Island is blessed with warm, clear skies most of the year. The climate is warmer than Hawaii. The water temperature is 80°F and visibility can reach more than 150 feet.

There are vast coconut plantations covering much of the island, which is also a world renowned bird sanctuary and breeding ground. Christmas Island is part of the newly independent Republic of Kiribati (pronounced Kir-a-bus). Until 1979 it was the British Colony of the Gilbert and Ellice Islands. Nowadays, most of the islanders' income is derived from copra production and fishing for the export market in Honolulu and the U.S. mainland. A fledgling tourist industry is in the making, so far advertised in Hawaii as a "fisherman's paradise," which I assure you it is. The bonefishing in the lagoon is some of the best to be found anywhere, world record fish having been taken. But, the hidden secret is that which lies underneath, where only divers go.

Flights to Christmas Island are available weekly through Air Tuaru, the national airline. It is a two and one-half hour flight by 727 from Honolulu. Air Tuaru, in conjunction with the Captain Cook Hotel, offers 5 or 12 day packages which include roundtrip air fare from Honolulu, accommodations, all meals, airport transfers, special luau and local entertainment. You arrive at 2:00 pm Thursday and board your flight to Honolulu around 4:00 pm on Monday.

There are three air compressors on the island and limited rental gear is available. It is assumed that visiting divers will bring their own masks, fins, snorkels and BCs. Regulators, tanks and backpacks are available for those wishing to go out on their own. Each diver will be required to show proof of current, internationally recognized scuba certification before any gear issues or air fills will be permitted. Guide services are available and recommended to get full enjoyment from your visit to Christmas Island.

A weekend of snorkeling can be exciting and is available for those not certified. At present, instruction is not available but as more divers come to discover the island services will inevitably be created to satisfy demand. Shore and boat diving are both excellent and readily accessible. Surfing, shore-casting, deep sea fishing, boardsailing and beachcombing are all pleasant diversions here. So get away for a weekend of pristine diving and have the dives of a lifetime. For information and reservations contact: Carol Farrow, 4767 Farmers Road, Honolulu, Hawaii 96819; phone (808) 735-3994. 🌿

COME TO COZUMEL



COME TO SOL CARIBE

The time has never been better to come to Cozumel. Come dive in our legendary clear waters. Discover the spectacular beauty of Palancar and other nearby reefs. Enjoy our beach and our freshwater pool. Play on our lighted tennis courts. Savor our cuisine, our music, our hospitality. Come now to the Sol Caribe Resort in Cozumel. You'll love the life!

Come to Sheraton for
Time of Your Life \$30* per night
Special Rates



Sol Caribe Resort

(Sheraton Referral Hotel)
Playa Paraiso, PO Box 259
Cozumel, Quintana Roo 77600, Mexico
Phone: 2-07-00 Telex: 753264 SHCOME

Call Sheraton Reservations

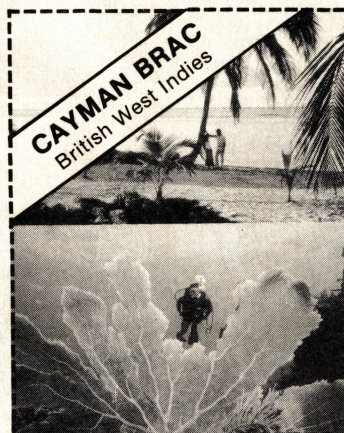
800-325-3535

or call your Travel Agent.

*Per person, double occupancy. Add 15% room tax to rate. No minimum stay. Subject to availability. Prices and taxes subject to change without notice. Not applicable to groups. Valid for use through 12/20/84. Ask about Sheraton's Family Plan. Up to two kids 17 or under stay free in parents' room when using available bedding.

©1984 The Sheraton Corporation

circle #148 on Reader Service Card



Please send me more information about diving packages at the new **Tiara Beach Hotel** on Cayman Brac. TB2

Name _____

Address _____

City/State/Zip _____

CALL TOLL FREE 800-847-7198

N.Y. STATE 800-252-6323

OUTSIDE U.S. 607-277-3484



Tiara beach hotel

Mail to: Divi Hotels Executive Office
520 West State Street
Ithaca, New York 14850



circle #150 on Reader Service Card

DIVE PENNEKAMP

- Pennekamp's Only Waterfront Dive Resort
- Deluxe Accommodations In One Bedroom And Two Bedroom Two Bath Suites
- Personalized Dive Packages
- Pools, Tennis, Jaccuzzis
- Waterfront Lounge Featuring Live Entertainment Nightly



**PORT
LARGO
RESORT**

**FOR INFORMATION AND RESERVATIONS:
CALL TOLL FREE 1-800-451-DIVE**

P.O. Box 1050 Key Largo, FL 33037 In FL Call 305-451-4107

circle #151 on Reader Service Card

YOUR PERFECT DIVE TRIP IS ONLY A TOLL FREE CALL AWAY.

If you are tired of run-of-the-mill disorganized dive trips, give us a call!



First Class escorted diving tours and AMA approved CME courses in diving medicine are available world wide from Human Underwater Biology.

Our specialists at **Dive Travel Concepts** will help you plan your most memorable dive trip to the world's exclusive dive sites. We promise it will be the

most superbly planned venture of your life.

Call today **TOLL FREE: 1-800-547-3747** for complete information or write:
HUB/TRAVEL CONCEPTS
8600 Wurzbach S/1201
San Antonio, TX 78240.



HUB

circle #152 on Reader Service Card

SLIDE SHOW COURSE

Jack and Sue Drafa are offering a one week class designed to help underwater photographers organize their best efforts into high quality slide presentations. The course is being offered August 25-September 1, at Spanish Wells, in conjunction with At Reef Ventures. Class size is limited to 14.

Classroom lectures will include such topics as: what's new in A/V equipment; steps in producing slide shows; special effects, computer graphics, steps to successful soundtracks; photo techniques; and hands-on programming. Each student will produce a slide show.

CRUZAN DIVERS

A new dive and watersports center is now open in Frederiksted, St. Croix, U.S. Virgin Islands. Cruzan Divers, on the waterfront at #12 Strand Street, only two blocks from the famous Frederiksted Pier, is a full service dive center. NAUI instruction is available from resort courses through assistant instructor. Specialty courses are also offered.

Package trips are available in conjunction with the King Frederik Hotel, which features ocean front accommodations with kitchenettes.

Small groups dive from the 24 foot *Cruzan Diver*, while larger groups dive from the 40 foot *Bayou George*. In addition, Cruzan Divers offers fishing charters, sailboarding and water skiing.

ADVENTURER

Adventure Divers of Ft. Lauderdale, FL is offering charters aboard the *Adventurer*. The vessel carries six divers, is fully equipped with VHF, depth recorder, teak platform, teak tank racks and stereo system. She visits diving sites in South Florida. Group rates are available.

M/V SEA EAGLE

The M/V *Sea Eagle's* tour schedule has been prepared by the Eagle's Nest Dive Center, Key Biscayne, Florida. The 53 foot, fully air-conditioned vessel will depart from Miami Monday mornings at 9:00 am for five days and four nights in Bimini, returning by 5:00 pm Friday. The tour has been designed to encompass the best of both resort based and live-aboard boat diving. The M/V *Sea Eagle* is SOLAS certified for 49 passengers and has over 25 mph capability. This cruising range will allow a wide range of dive sites to be comfortably covered.

Hotel accommodations and meals will be provided by the Bimini Yacht club. The rooms are double occupancy with private bath. The hotel has a bar with entertainment and a game room.

Miami wreck and reef dives are scheduled for Saturdays and a Pennekamp Park snorkel trip on Sundays. *Sea Eagle* is available for private charter.

Call our new toll-free number
1-800-DIVE NOW

La Mer is going nowhere

We are no fly-by-night business. We've been here six years and we'll be here sixty more so you can safely plan your dive trips with us a year or two in advance. Call or write us for our new, free brochure and start charting your future with us right now.

Red Sea • Galapagos Islands • Cocos Island • Australia
Maldiv Islands • Belize • Sea of Cortez • Philippines

LA MER

La Mer Diving Seafari, Inc.

823 U.N. Plaza, Suite 810, NYC 10017 Telex:238973AIII

In New York State call 212-599-0886

or in the continental U.S. call 1-800-348-3669.

That's 1-800-DIVE NOW

SETTING NEW STANDARDS

Cruise Dive aboard the SEA AGGRESSOR, 90' of newly fitted oceangoing comfort. Our friendly courteous crew is waiting to welcome you aboard.

We are proud to offer: • 2 compressors to provide unlimited free air • easy water access • E 6 film lab • individual on deck dive lockers • full air conditioning • sumptuous Native dining • stops in the Bahamas • windsurfing • snorkeling • dinghy trips • on-board video • tiki bar • under-water photo & navigation seminars are available
Non Divers are cordially invited.



Cruise Dive the Bahamas

DEPARTS WEEKLY FROM WEST PALM BEACH **\$599 / 6 NIGHTS**
FLORIDA ADVENTURE MAKERS, INC. • P.O. BOX 1778 • JUPITER, FL 305-747-6647

circle #154 on Reader Service Card

\$499

London House

Grand Cayman

Bob Soto's

DIVING LTD.

Live like a Millionaire. Dive like a King.

A luxuriously designed resort complex located on the famous Seven Mile Beach. All apartments are air conditioned, fully furnished and have well outfitted kitchens. Dive in the warmest, clearest water and best wrecks and reefs in the world.

April 15/84 to December 15/84

Per person rates	Two bedroom 4 people	One bedroom 2 people	A.M. Dives	Night Dives
8 days/7 nights	\$499	\$699	6	1
6 days/5 nights	\$359	\$479	4	1
4 days/3 nights	\$219	\$289	2	1 P.M. Dive

Dive Package Includes:

- Deluxe accommodations at London House.
- All gratuities and taxes.
- Airport round trip transfers.
- Daily maid service (except Sundays).
- Wine and cheese package.
- One Bob Soto T-Shirt (per person).
- Unlimited shore diving.
- Tanks, weights, belts and back pack.
- Dive pickup at London House.

Information and Reservations:

National WATS 800-327-2740 327-8777
In Florida 800-432-4858 305-981-0156

*Four person occupancy per two bedroom, two bath apartment.

B.W.I. 1-809-947-4060

circle #156 on Reader Service Card

SAVE THE CLAMS

Bob Soto's Diving, The Cayman Islander Hotel, and Cayman Airways have joined forces to protect that endangered species living in your wallet.



We offer all the finest diving and comfortable accommodations you've come to expect with some amazingly low prices you'll come to love. Simply call the toll-free number below and find out just how many clams our bonus dive program can save for you.



1-800-327-3835

Broward 987-8880. Dade 620-6917.

circle #155 on Reader Service Card



★ NEW INVENTION ★

3 Sizes Available

You can now enjoy boating, swimming, diving and skiing SAFELY in the oceans, lakes, rivers, or ponds—anywhere your boat can go....
STEP-ON™ Safety Boarding Systems can go with it!

- ★ Constructed of the finest teak & stainless steel materials.
- ★ Drill 4 holes; mounts in minutes.
- ★ Easy two-pin mounting bracket makes removal a snap.
- ★ Step folds out & locks for easy entry.
- ★ STEP-ON™ eliminates step ladders; safely & easily load & unload your boat while on trailer.
- ★ Comes fully assembled.

The STEP-ON™ dive and swim platform solves the age-old problem of boarding after swimming for young or old, even heavier people or those with a physical handicap. And is the ultimate for divers.

Write for FREE brochure to:

STEP-ON™, Inc., P.O. Box 1116, Ft. Pierce, FL 33454
or call (305) 464-5800

PATENTED

circle #149 on Reader Service Card

NAUI/FISHEYE COLLEGE

Fisheye Photographic Services of Grand Cayman has opened its doors as an U/W Photo College sanctioned by NAUI. The brainchild of Fisheye owner Martin J. Sutton and chief photo instructor David Dunbar, the college, open year-round, offers instruction in all levels of U/W photography.

The entry level is the Easy Photographer Course, a half-day course run every afternoon, which introduces the neophyte to the basics and includes a lecture and a boat dive on a shallow Cayman site. A three day Open Water Course expands on this knowledge and includes macro and wide-angle sessions. Six boat dives are included, of which three are on deeper walls. The next level is the six day Advanced Photographer Course, designed for those who already understand the basics of U/W photography and want to increase their knowledge of more specialized techniques. Photo Pro, a course for divemasters, will train photo assistants and photo specialists. The eight day Photo Instructor Course is for those working in dive shops who want to open a photo section or independent scuba instructors who want to learn to teach photography. A complete master set of course notes is included along with a factory sanctioned repair course for Ikelite underwater strobes.

In order to more easily teach the new courses, Fisheye has expanded its classroom facilities and a custom designed air-conditioned classroom is now used. The classroom facilities are also available for visiting instructors bringing groups to Cayman to complete photo courses.

SOTO'S VACATION CERTIFICATION

The Bob Soto's Diving Ltd. Certification Vacation begins with scuba training at the new Scuba Centre on the shore of Grand Cayman. Initial training takes place in a protected cove rather than a pool, then proceeds to boat diving.

The rate of learning depends on the student, but the course usually covers five days and qualifies the diver to the open water level, one level higher than basic. PADI training materials are used and the curriculum is especially designed by Bob Soto's to meet or exceed both NAUI and PADI standards, with special attention given to diving in the Caribbean. The cost includes rental of equipment.

Dates for the certification vacation have already been set, but if there are groups of four or more people who can't meet the schedule, they can arrange to have a course given at their convenience. Regular courses begin September 17, October 22, November 19 and December 17.

FT. LAUDERDALE

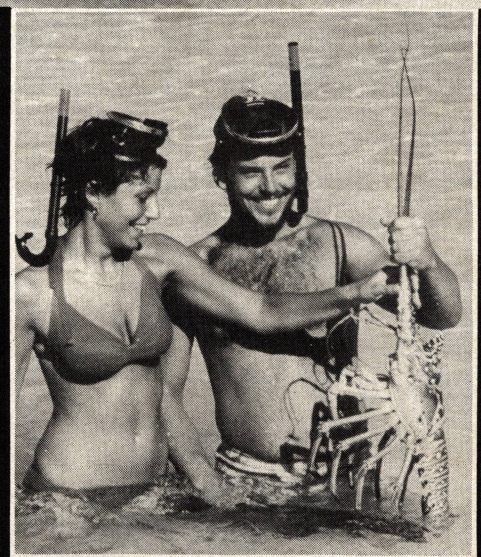
WHERE THE ACTION IS!

SUMMER SPECIAL
2 TANK BOAT DIVE

\$10.00



QUALITY
INSTRUCTION
GOOD DIVING
FANTASTIC FUN
GREAT PEOPLE
SUPER HOTEL
ON BEACH



5 Days/4 Nights
(10 Dives)
Double P/P

Diver	\$142
Non-Diver	\$92



3 Days/2 Nights
(6 Dives)
Double P/P

Diver	\$76
Non-Diver	\$46

DIVERS UNLIMITED

CALL TOLL FREE
FOR INFORMATION
1-800-327-2740

IN FLORIDA
305-981-0156

DIVERS UNLIMITED

6023 Hollywood Blvd., Hollywood, FL 33024

NAME _____
ADDRESS _____
CITY/ST/ZIP _____

Interested in our other dive packages?

☐ Florida Keys ☐ Cozumel ☐ Grand Cayman ☐ Bonaire 



SAIL DIVE THE BAHAMAS ABOARD THE SEA EXPLORER or MORNING STAR

Our 65' custom sailboats are fully Coast Guard approved and certified to carry 22 passengers in complete comfort.

- Departures from Miami
- 4 days or 7 days
- Meals, liquor, fishing, air and tanks included
- Fully air-conditioned
- Custom charters available

Blackbeard's
CRUISES

P.O. Box 66-1091, Miami, FL 33266
Toll Free (800) 327-9600
Florida (305) 888-1226

circle #158 on Reader Service Card

dive the bahamas

M/V Tropic Jack - 70' Diving Yacht — Excellent Food Unlimited Air Fill's — Your choice of more than 40 Intriguing Sites in the BIMINI Area. As well as Ledge, and Wreck Dives. 8 Years of Continuous Operation — 5 Double Staterooms with 3 Hot & Cold Showers — Economical Prices for Groups.
Contact:



Tropic Jack Cruises
1803 Upland
Houston, Tx. 77043
713/465-3175

circle #159 on Reader Service Card

SIDE SCAN SONAR RENTAL

- Available at daily or weekly rates
- For individuals, clubs, or commercial operations
- Prices with or without operator
- Cost no more daily than boat charter

FOR INFORMATION WRITE TO:

Underwater Explorations Unltd.
2641 Woodberry Dr. Winston-Salem, NC 27106

circle #202 on Reader Service Card

RARELY SEEN

LIMIT: 18 Divers

Virgin Coral Reefs. Unspoiled tropical island paradise.

Plantation
RESORT
A DIVER'S PARADISE IN THE WESTERN CARIBBEAN

For reservations, Call:
(713) 789-6790

circle #160 on Reader Service Card

Bonaire Beach Hotel

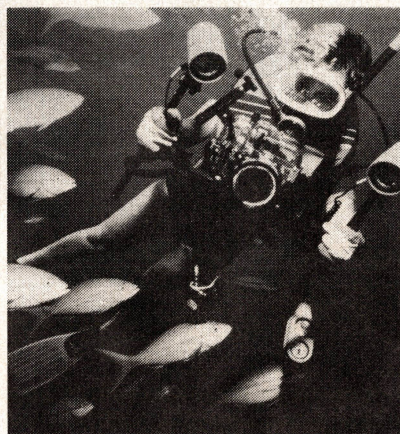
We're making lots of changes at Bonaire's largest hotel to better serve you... new name, new look, new management and more. Couple all this with the world's greatest diving and your next dive trip will be to the Bonaire Beach Hotel.

Special 8 day/7 night Package

\$497 per person/
double occupancy

includes transfers, welcome drink, room, Manager's cocktail party, two meals daily, 6 reef trips, unlimited air, island tour, sunset cruise, sunfish sailing, windsurfing, tax, service charge and more. Valid till Dec. 15, 1984.

For Information & Reservations call
Toll Free (800) 526-2370.
In New Jersey (201) 566-8866.



Home of Bonaire Scuba Center

Managed by Caledonian
Hotel Management



circle #161 on Reader Service Card

NEW JERSEY SHIPWRECKS

BY JOHN SCALIA, JR.

More than 3,000 wrecks lie beneath the chilly waters surrounding New Jersey. The reason for the large number in this area is the heavy traffic of ships that frequent New York City in the north and Philadelphia in the south. The 120 miles between these two large ports was a prime location for German U-boats to patrol. They did their duty, sinking almost 50 vessels during World War I and over 140 during World War II. It was evident that the ships were silhouetted against the beachfront lights thus, they were easy prey for the U-boats. In March 1942 the Army ordered a permanent coastal dim-out in an attempt to halt the sinking of ships off the Jersey beaches. But this was only accomplished after 30 vessels were already sunk in the months of January and February. The Navy retaliated by equipping dirigibles, from Lakehurst, with depth charges. The crews could spot a U-boat 90 feet in the water and destroy it; they destroyed several, but these wrecks have yet to be found. Many other vessels were lost in the last 300 years by fires, collisions, mines or in violent storms.

Today the wrecks have created a Shangri-La for the enthusiastic and dedicated. A person has to get up at 4:00 am and drive to one of the several dive boats in the area, enduring, at times, a wind chilling boat ride in rough waters. Sighting up is often difficult because many divers wear double tanks with a mounted pony bottle. Since the diving is somewhat on the deeper side, many decompress, which would make a drysuit a preferable piece of equipment and a liftbag and upline a necessity. All these hardships are overwhelmed however, by the rewards; visibility usually averages 30 to 40 feet, and even more on the deeper wrecks. But there is no color here since the multiple thermoclines diffuse the light out of the water, resulting in a gray color. The plankton also reduces visibility, but provides food for the prolific supply of marine life, such as crustaceans, mollusks and a wide variety of fish, including some stray morays and tropicals.

A very popular sport within scuba is junk diving, during which one recovers the lost objects within the wreck, such as portholes, deadeyes, dinnerware, bottles, door knobs, bells and other trinkets. The belief that the wrecks are stripped clean of artifacts is false. All the wrecks have artifacts to a degree, even the shallow ones. As divers gain experience they usually move onto the deeper wrecks.

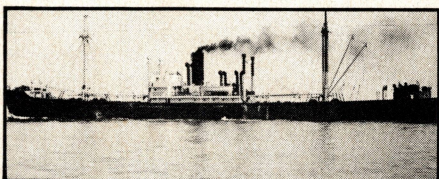
The following is a brief description of

some of the more popular wrecks along the coast:

Almirante: This 5,010 ton freighter was rammed and sunk on September 6, 1918 with a complete loss of her cargo of flour, hence the nickname The Flour. She now lies in 65 feet of water, eight miles off Brigantine. She was blasted by the Corps of Engineers to clear navigation.

Today she is mussel encrusted, and visibility is usually very good, exceeding 20 feet. Still yielding artifacts, she is very popular with both the experienced and the novice. She is also an excellent lobster dive, for there are many large holes for them to hide in. Spearfishing is ever popular with tautog, ling, blackfish and cod being plentiful.

Astra: This 2,709 ton freighter was rammed and sunk by the *Steel Inventor* on March 30, 1951, 11 miles east of Atlantic City. She lies in two sections, the

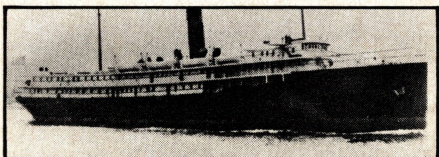


bow being 100 feet north of the stern, in 85 feet of water, in a NW/SE direction.

Today she is mussel encrusted like most of the wrecks along the coast. She is not very popular because of the poor visibility for she lies in mud. In the stern section Kelly babets can be recovered with a prybar. A Kelly babet is a type of lubricating metal used to keep the propellers moving. She is also a very good spearfishing dive. Lobster, some quite large, can be found by the adept. Overall, the *Astra* is a perfect dive for both the experienced and the novice.

City of Athens: At 1:30 am, May 2, 1918, this 390 foot passenger liner was rammed by the French armored cruiser *La Glorie*. *La Glorie* ripped through the *Athens*' side below the waterline. The gash and her forward momentum brought her to the bottom, not even allowing enough time to launch any of her lifeboats. Sadly enough, 33 passengers and 33 crew members now lie in memory 26 miles southeast of Townsend's Inlet.

The *Athens* today is one of the more popular wrecks along the coast She lies



in 105 feet of water with visibility always exceeding 50 feet, and is a sight any diver will never forget! Partially intact, fascinating artifacts of china, bottles, World War I French small arms ammunition, portholes, and even brass searchlights still remain. She also produces some very large lobster, and a myriad of fish.

ALM TAKES YOU TO BONAIRE.

...from Miami every day of the week. Non-stop on Saturday. And, when you fly round trip from Miami on ALM, we'll fly you to Aruba and Curacao, FREE. See you travel agent for details.



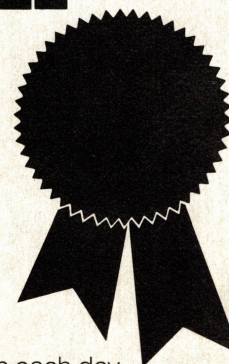
ALM
ANTILLEAN AIRLINES



1-800-327-7230 toll free — In Florida 1-800-432-2849. Special airfares available from most areas in the U.S. To receive brochure, "ALM Takes You Diving In The Dutch Caribbean," circle reader service card or write to Dive Brochure, P.O. Box 10338, Riviera Beach, FL 33404-1338.

DIVE BONAIRE GUARANTEE

**THE ONLY
GUARANTEE
IN THE
INDUSTRY
THAT IS OFFERED
365 DAYS A YEAR.**



- ☐ We guarantee your hotel reservation each day of your stay.
- ☐ We guarantee your dive boat will operate every day.
- ☐ We guarantee our weather — the best in the Caribbean, permitting us to take you diving **every day of the year.**

Or, your entire package minus airfare is free!



Flamingo beach hotel
DIVE BONAIRE



A
PETER HUGHES
Dive Operation

FOR MORE INFORMATION, WRITE
FLAMINGO BEACH HOTEL / DIVE BONAIRE
520 WEST STATE STREET, ITHACA, NY 14850

NAME _____
ADDRESS _____
CITY/STATE/ZIP _____

FOR IMMEDIATE INFORMATION

800-847-7198

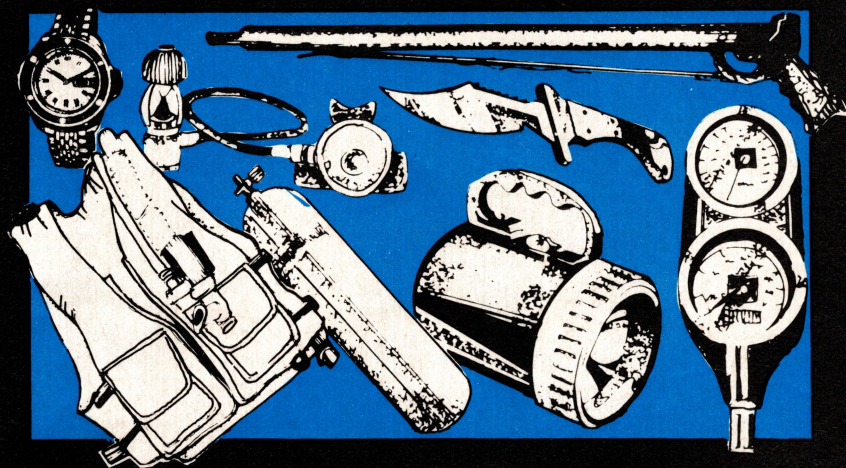
IN NY STATE — 800-252-6323 • OUTSIDE U.S. 607-277-3484

circle # 162 on Reader Service Card

America's Diving Headquarters

You get the
lowest prices,
name brands,
fast service,
and FREE
shipping at...

Divers Supply



Call or visit...

INFORMATION EXPRESS LINE

1-912-474-6790

TOLL FREE ORDER LINE
(OUT OF STATE ONLY)

1-800-241-4739

Phone charges
credited to order.

Divers Supply



A Division of Outdoor Adventures Unlimited

5208 Mercer University Drive • Macon, Georgia 31206
(I-475 at Thomaston Road, Exit 2)



Life support equipment should not be used or operated unless you have taken qualified instruction and certification. This ad does not constitute an offer to sell via mail order.

circle #163 on Reader Service Card

NEW JERSEY WRECKS

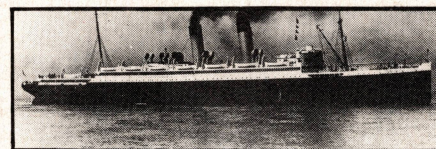
Great Isaac: This naval tugboat was 185 feet long and 30 feet wide. She sank on April 16, 1947 after being rammed by the *Bandeirante*. Today she lies in 84 feet of water, 10 miles off Surf City.

This wreck is very popular with divers because she yields a partially never-ending amount of artifacts. In the spring of 1981 her helm stand was recovered, but the helm itself was lost years before when the liftbag carrying it dumped and sank to the bottom; it was never found. She is completely intact; with her narrow corridors, it is advised that the inexperienced diver not penetrate her. The outside of the wreck provides enough to see and spearfishing is very good. Giant ling virtually carpet the wreck, and can be speared with a knife. Monkfish bury themselves in the sand and can be caught by holding a large bag in front of them and nudging them into it. Lost gear almost litters the sand.

Gulftrade: This 7,500 ton tanker was torpedoed on March 10, 1942. She split into two sections, both of which initially remained afloat. Her cargo of oil caught fire but was extinguished by the waves. The bow drifted toward shore and was partially salvaged. The stern sank in 84 feet of water, 13 miles off Barnegat Light. The bow sank in 55 feet of water, four miles off Barnegat Light. It was blasted by the Corps of Engineers to eliminate any navigational hazards.

Today the wreck halves are very good lobster dives, for on both there are many large holes for lobster to hide in. They are also very good spearfishing dives. The visibility on the stern often exceeds 25 feet, while the visibility on the bow is not very good. Penetration on the stern is quite easy since she is intact, and entrances are easily found. The corridors are a comfortable width but, as in all cases, caution should be taken. Artifacts on both halves can be found by those who are lucky and adept.

Northern Pacific: This 500 foot Cunard Liner lies in an inverted position, 40 miles



southeast of Cape May, in 145 feet of water. She sank in 1946 after drifting afire with a skeleton crew aboard.

Today she is completely intact, except that her two propellers were salvaged. She is frequently visited by advanced divers because her brass portholes are attached with steel bolts, which can be broken easily with a mallet and pulled

(Continued on Page 94)

Technifacts

BY E.R. CROSS



In researching back issues of SKIN DIVER Magazine for data to be incorporated in this month's Technifacts, I came across an item in the July 1983, Wreck Facts that caused concern. Mr. Boyd quoted a man who had been diving on a German wreck, the *Prinz Eugen*, two Japanese tankers and several airplane wrecks in Kwajalein Atoll. I believe a great deal of caution should be taken in diving on any wreck in some of the Marshall Islands, particularly in the Bikini-Kwajalein Atolls.

During July 1946, two atomic bomb tests at Bikini Atoll, first an air drop and then an underwater blast, produced a lot of radioactivity in target vessels. Many of these that did not sink more or less immediately at Bikini Atoll were scuttled or allowed to sink later at other atolls, in-

cluding Kwajalein. Some of the target vessels, the carrier *Saratoga* for one, were allowed to sink simply because radioactivity was so intense that salvage crews could not spend enough time on board to keep them from sinking.

The German heavy cruiser *Prinz Eugen* was one of the Bikini target vessels. She was moored a short distance from ground-zero in the target array. After the air burst she caught fire and suffered some structural damage. Other vessels, some even closer to the center of the array, were the Japanese light cruiser *Sakawa* and battleship *Nagato*. The *Sakawa* suffered extensive damage and sank the day following the air drop. The U.S. carrier *Independence* and submarine *Skate* were both heavily damaged and very radioactive. Also in the target array were

the U.S. battleship *Nevada*, painted orange-red and in the center of the array for the air drop, plus many transport, landing craft and tanker type vessels. Salvage crew tolerance on board many of these vessels was extremely limited owing to high levels of radioactivity.

Following the underwater blast an even greater amount of radioactivity was present owing to the radioactive water column that *completely covered all test vessels*. I watched both the tests from a few miles offshore and boarded several of the target ships a short time afterward. Following the air drop, the objective was to fight fires and recover test animals and instruments for study. After the underwater blast the objective was to keep vessels from sinking long enough to perform basically the same functions. In both cases



Club Caribbean

Runaway Bay, Jamaica, the West Indies

8 day/7 night dive packages

\$439* **\$339***

Diver

Non-Diver

- 1 dive a day (tank, wt, pac, boat & guide)
- Breakfast and dinner daily
- Individual cottage accommodation
- Airport transfers/hotel taxes and tips
- Free watersports

Budget package

\$299* **\$169***

Diver

Non-Diver

Includes breakfast only and 5, 2-tank dives

*per person, double occupancy

Dive the wreck of the Anne Bonny and enjoy the personalized service of SunDivers. J.A.D.O. member and PADI International Training Facility.

For further information contact:

H.T.R. (800) 221-4588
in N.Y. (212) 223-0976
or call Club Caribbean
(809) 973-3507
or SunDivers
(809) 973-2346



SUNDIVERS
 JAMAICA LTD.

SOUTH COVE
GRAND CAYMAN B.W.I.

More Diving For Your Money
Friendly Creatures ... Above and Below



PETER HUGHES
DIVE OPERATOR

For information on our new packages call 1-800-231-4610
Florida and Outside Continental U.S. 1-305-854-5444

Photo: Stephen Frink

circle #165 on Reader Service Card

TOM MOUNT'S UNDERWATER PHOTOGRAPHY COLLEGE
WITH
PATTI SCHAEFFER
UNDERWATER MODELING SCHOOL

Baskin The Sun - Haiti
Anthony's Key - Roatan
Spanish Cove - Cayman
or travel with us to
The Philippines May 9-25
The Galapagos June 10-24
The Coral Sea December

1545 NE 104 ST.
MIAMI SHORES, FL 33138
305 754-1027

circle #166 on Reader Service Card

Wet your whistle but don't drown it.

Don't drink too much of a good thing.
The Distilled Spirits Council of the United States.
1300 Pennsylvania Building, Washington, D.C. 20004

GINNIE SPRINGS
RESORT & DIVE CENTER

OUR DIVING IS GREAT REGARDLESS OF WEATHER
JUST OFF I-75
2 DAY/2 NIGHT PACKAGE
\$39.95
per person

- No Wind
- No Waves
- Visibility Forever

FREE BROCHURE
1-800-874-8571

904-454-2202
Your check welcome

GINNIE SPRINGS
Rt. 1, Box 153
High Springs, FL 32643

master charge
VISA

Photo Copyright 1983 Steve Lucas

TECHNIFACTS

we followed the radiological safety crews carefully to keep clear of extremely "hot" areas and to know when we had been subjected to our "safe limit" of radioactivity. Some vessels and sections of vessels were much too radioactive to enter.

Granted, 42 years is a long time. However, based on what I observed and on the rather unscientific decontamination and disposal techniques available at the time, caution is advised in diving on vessels in the Kwajalein-Bikini Atolls that were target ships for atom bomb tests.

Now, onto historical diving and the quite different but no less real problems that this phase of diving has generated.

DIVING FOR HISTORICAL OBJECTS

Technifacts has been studying and reporting information about the sport diving activity I have dubbed historical diving since December 1981. It was pointed out then that a great deal of the world's history lies lost beneath the surface of our watery planet. It was also pointed out that much of this lost history has become known only since the development of scuba and the involvement of sport divers in underwater exploration. The true scope and, even more importantly, the true historical value, of this legacy that lies scattered and uncharted across the bottom of the seven seas and innumerable lakes and rivers, is now being developed on a worldwide basis.

A controversy has developed over whether or not sport divers, and commercial divers too, should be allowed to dive on historical sites, particularly on the wrecks they have located and reported. If it hadn't been for the sport and commercial divers no one would know the whereabouts, or, in many cases, even the existence of many of the historical marine sites. Now attempts are being made in some countries, and in some states, to ban all diving on these finds.

If educated, rational, steps are not taken soon, it will be too late. Too late to save, by legislation, many of these historically interesting and some important sites and too late for divers to have the privilege of exploring and helping to recover these bits of the past, locked in the time-space of the marine environment.

There simply are not enough marine archaeologists to locate, scientifically destroy and report on even a small fraction of the finds now known. There are at least 4,000 known wrecks in coastal waters of the United States and probably thousands of more sites, both vessels and others, in the lakes and rivers of this country. It would be folly to bar all diving on these sites; to make it illegal to search for, explore and report on these finds.



LEAVE THE CROWDS BEHIND!

with **Calypso Divers LTD.**

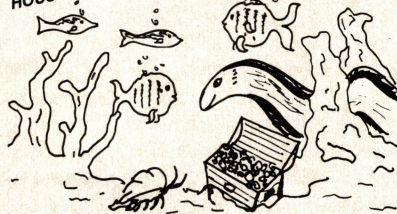
GRAND CAYMAN ISLAND B.W.I.



Call FREE 1-800-527-2502

Small Group Packages Available

IN DALLAS (214) 631-4388
IN HOUSTON (713) 444-5567



circle #168 on Reader Service Card

LEARN TO BE A PROFESSIONAL DIVING LEADER



**Underwater Instructor
Assistant Instructor
Resort Divemaster
Rescue Specialist**

You can learn to be a nationally recognized Diving Leader at our fabulous resort on the beautiful coral reefs in the clear warm waters of the Florida Keys. These are not testing sessions, but comprehensive training programs at the

NAUI

PROFESSIONAL
DEVELOPMENT
CENTER OF THE
FLORIDA KEYS

The National Assn. of Underwater Instructors
Write or Call for Information:

HALL'S DIVING CENTER
"A VACATION RESORT FACILITY"

1688 Overseas Hwy. (305-743-5929)
Marathon, Florida Keys 33050
NAUI — CMAS

It is equal folly for divers to wantonly destroy their finds without first making a study to determine the historical value of the material found.

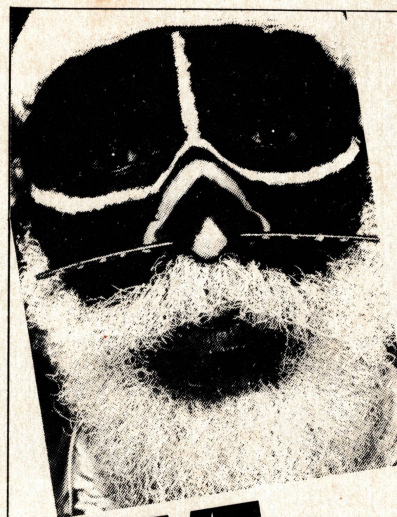
There must be cooperation between governments, both at the state and federal levels and the sport and commercial divers. In at least five states there is a joint effort and a mix of state, federal and private funding for working historical sites under the guidance of a scientist.

South Carolina recognized that this cooperation must exist when it passed *The South Carolina Underwater Antiquities Act of 1982*. In the introduction to this act it is stated, "Management of the artifact and fossil resources cannot be reasonably carried out through the law and law enforcement alone, nor should it. Management must involve responsible cooperation between state officials and the sport diving community and this law through its licensing provisions provides the avenue for this cooperation. Most of the knowledge of South Carolina's U/W artifacts and fossil resources has come directly from sport divers working within the law in cooperation with Institute personnel. This reflects a high level of responsibility, acceptance, and understanding of the vital role played by a citizen in the management of state affairs."

According to Anne G. Giesecke, whose "real line of work" is with the Department of the Interior, Offshore Oil and Gas Leasing, in a paper titled *Dive American History*, "Sport divers are working with 15 states, and the Virgin Islands, to write American history—to fill in the blanks about the everyday individual. Five states have the best programs for working with divers. These are: (1) North Carolina; (2) South Carolina; (3) Vermont; (4) Virginia; and (5) Michigan. The top five programs were evaluated on the basis of how many sport divers have worked with the state and what material the state has published to aid the divers. Other states with good programs are: California, Florida, Indiana, Louisiana, Maine, Maryland, Massachusetts, New Jersey, Pennsylvania, Texas and the Virgin Islands."

In a booklet published by the Underwater Archaeology Branch, Division of Archives and History, North Carolina Department of Cultural Resources, titled *Underwater Archaeology in North Carolina*, it is stated, "To accomplish these goals within the limits of a small operating budget the program relies on a project-oriented approach. Local interest in the operations is generally sufficient to generate additional support. Students from participating educational institutions and avocationally motivated volunteer divers complement a permanent staff."

For further information on North Carolina's underwater archaeology program write to: Underwater Archaeology Branch, Division of Archives and History, P.O. Box 58, Kure Beach, NC 28449.



DIVE Papua New Guinea

Imagine a country surrounded by warm clear waters all teeming with life; coral formations never before seen by man; breathtaking drop-offs; hundreds of untouched World War II wrecks. That's diving in Papua New Guinea.

Topside there's fascinating thousand year old cultures still being played out against a backdrop of spectacular scenery.

Dive from your base at the Kaivuna Hotel in Rabaul and you can experience the awesome majesty of diving relics of a 1942 naval battle or take in the many superb local reef dives.

Jais Aben Dive Resort near the beautiful town of Madang provides spectacular coral reefs literally at the front door, and the war wreck strewn Hansa Bay nearby.

Join Sea Safaris Travel on a dive expedition to Papua New Guinea. Send for details today.



Kerry A. Byrd, Air Niugini.
5000 Birch Street, Suite 3000,
West Tower Newport Beach,
California 92660
Please Print.

Name _____

Address _____

AIR NIUGINI
THE NATIONAL AIRLINE OF PAPUA NEW GUINEA

S408

It's Better In The Bahamas

**WALKER'S CAY
CHUB CAY CLUB
THE PILOT HOUSE
SMALL HOPE BAY LODGE
SPANISH WELLS RESORT
VALENTINES YACHT CLUB
GREAT ABACO BEACH HOTEL
SOUTH OCEAN BEACH HOTEL
ATLANTIK BEACH HOTEL/UNEXSO**

We've Got Your Island

Experience: Crystal clear waters...Palm shades white sand beaches...The seclusion of your own private bungalow on a tropical lagoon or a sophisticated island resort... Golf, Tennis, Windsurfing.

Scuba packages from...

\$139.00

Simply the best vacation experience of a lifetime!



Eastern

Aqua Adventures, Inc.

P.O. Box 1792, Murray Hill, N.Y., NY 10156 (212) 725-5330

circle #169 on Reader Service Card

Mike Kevorkian's

Men's Bikinis

- Fast drying nylon lycra
- Solid colors (black, blue, navy, brown, maroon) and exotic prints.
- 1" sides, double front in S, M, L, XL (\$9.95 — 3 for \$25)
- 1/2" clip-on sides, one size fits all (\$14.95 — 2 for \$25)
- \$2 postage and handling

Women's String Bikinis

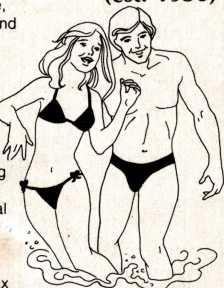
- Beautifully styled minimal brief. \$16.95 (2 for \$30) plus \$2.00 postage and handling

Fla. res. add 5% sales tax

TARPOON SKIN DIVING CENTER

3200 Palm Ave., Hialeah, FL 33012 (305) 887-8726

State law prohibits the return of intimate apparel



SWIMWEAR SPECIALISTS (est. 1956)

Working Partner Needed for Warm Water Tropical Full Service Dive Store and Charter Operation. \$100,000.00 Cash Investment Required. Send Photo, Resume & P&L to: Palani Endeavours, PO 1656, Lahaina, Maui, Hawaii 96767

AQUA LENS

A UNIQUE LENS HOUSING FOR NIKON FENSLER DESIGNED FOR BOTH UNDERWATER AND TOPSIDE USE. FOR COMPLETE INFORMATION, WRITE:

Aqua Vision Systems Inc.

BOX 1097, POINTE-CLAIRE, QUEBEC, CANADA



H95 4H9

PUT YOURSELF IN OUR SHOES. CAYMAN BRAC ONLY \$299.

Imagine strolling right from your room to the beautiful blue Caribbean. Diving in the clear, unspoiled waters of Cayman Brac in the British West Indies. For only \$299. Our bonus dive program gives you all that. And more.

Round trip airfare from Miami on **Cayman Airways**. Beautiful oceanview room at the **Brac Reef Beach Resort** in Cayman Brac. Two-tank boat dives each full day (2), one night dive, and unlimited shore diving with **Brac Aquatics**.

All this for only \$299 per person, double occupancy, 4 days 3 nights. Other packages are available to fit your schedule. Just give us a call and find out how affordable our Brac Bonus Dive Package can be. National Toll Free: 1-800-327-3835. In Florida: Broward 987-8880. Dade 620-6917.



1-800-327-3835

circle #173 on Reader-Service Card

TECHNIFACTS

Another interesting little manual titled *Wreck Diving In North Carolina* is available from UNC Sea Grant, 105 1911 Building, North Carolina State University, Raleigh, NC 27650.

Still another small manual that will be found both very interesting and instructive is *A Sportdiver's Handbook for Historic Shipwrecks: Tools and Techniques*. Send \$1 to cover postage and handling to Northeast Marine Advisory Council, NEC Administration Building, 15 Garrison Avenue, Durham, NH 03824. This is a must for divers interested in getting the most out of historical diving finds.

I feel it is generally agreed that not every underwater site, and not every shipwreck, is worthy of being designated an underwater historic property. However, it usually requires the expertise of a marine archaeologist to make a decision with respect to the importance of a site. In a booklet titled *Underwater Historic Preservation: A Guide to the State Law and the Permit Procedures for Divers in Vermont*, legal definitions help resolve differences of opinion and therefore permits licensing to work various types of finds by divers:

Underwater Historic Property is any shipwreck, vessel, cargo, tackle or underwater archaeological specimen, including any found at refuse sites or submerged sites of former habitation, that has remained unclaimed for more than ten years on the bottom of any waters.

Specimen means a relic, artifact, remain, object or any other evidence of historical or prehistorical archaeological or anthropological nature, which may be found on or below the surface of the earth and which has historical value as an object of antiquity.

Isolated Finds are specimens or artifacts that are found on or near shipwrecks or other kinds of underwater historic properties. Isolated finds are thus distinguished from specimens that are related to, and physically associated with, a larger historic property and all its component parts.

Field Investigation means a study of the traces of human culture at any land or water site by means of surveying, digging, sampling, excavating or removing surface or subsurface objects.

Significant means important to local, regional or national history or prehistory. The significance of a property, and its relative significance to other properties, is the key concept upon which preservation priorities are based.

Reconnaissance means field investigation for the purpose of identifying, evaluating and documenting underwater historic properties. The act of searching for an historic property in the course of recreational diving activities is not in this def-

inition. However, activities such as mapping, taking an inventory of artifacts and any other information gathering tasks are included in this definition.

Artifact Recovery means the systematic displacement, removal or excavation of all or parts of an underwater historic property in such a manner that the maximum amount of scientific, historic, archaeological and educational information is obtained.

Next month Technifacts will explore and define requirements of other states and report on what has happened within the areas of cooperation between divers, state and other governments to enhance historical diving for both the diver and the regulating body.

Anne G. Giesecke of Arlington, VA has, as part of her Ph.D. dissertation (1984, Catholic University of America, Shipwreck Archaeology and State Law) compiled a three page Comparison of State Laws. This digest should prove useful to all who are interested in the current thrust toward regulating diving on historical sites. Persons interested in receiving a copy of this should send such a request and a stamped, self-addressed envelope to Technifacts, c/o SKIN DIVER Magazine, 8490 Sunset Blvd., Los Angeles, CA 90069. Perhaps if we all work together, rules, regulations, permits and rewards for diver effort can be standardized and everyone, diver and non-diver alike, will benefit. Last year 1,513 divers made important contributions to American history by locating and recording historical shipwrecks. Be with us next month and find out more. >>>

U/W TREASURE HUNT

The Fifth Annual Underwater Treasure Hunt to benefit Trooper Island Boy's Camp on Dale Hollow Lake (Clinton County, KY) will be held on Trooper Island September 1-2. Over \$2,500 in prizes will be given away, including a weekend for two at Rum Cay in the Bahamas.

Cabins are available for the first 80 paid participants and camping is free. All meals, including a barbecue, a night dive and demonstrations are included in the entry fee.

For further information contact Gregory and Associates, Inc., River Divers, P.O. Box 251, Lewisport, KY 42351. >>>

DIVE WORKBOOK

Dr. Robert Willisroft has written a new dive workbook, *Basic PIT Diver*. The book is designed to be a Programmed Instruction Text (PIT), compatible with nine popular current diving texts. It is the first in a series of PIT texts, which, when complete, will include workbooks for every aspect of dive instruction.

Basic PIT Diver is available in dive shops, or from Straub Printing, 4535 Union Bay Pl., N.E., Seattle, WA 98105. >>>

TIRED OF DIVING IN LARGE GROUPS?

*you must dive Cayman
at least once with*

Peter Millburn

Explore the Wall, Wrecks, Caves and Virgin Reefs under the personal direction of Cayman's best known Divemaster.

contact the travel professionals at Sea Safaris to arrange for your air fare, accommodations and dive package . . .

Sea Safaris

Sea Safaris Travel, Inc.
3770 Highland Ave., Suite 102
Manhattan Beach, CA 90266
(800) 821-6670;
(213) 546-2464 (Calif)



circle #171 on Reader Service Card

"ISLAND FANTASY"

A PALM BEACH LOVE BOAT

90' Mini-Cruise Ship-Custom Built
NOT JUST A DIVE BOAT BUT LUXURY AFLOAT



6 DAYS \$600. 4 persons
per room

FOR INFORMATION:
FRANK'S DIVE SHOP
301 E. BLUE HERON BLVD.
RIVIERA BEACH, FL 33404
Phone: (305) 848-7632

INCLUDES:

- 3 meals a day • Waiters & Bartenders
- Gourmet Chef • Trap Shooting • Games
- Movies • Complete boat air conditioned
- 24 hrs. • State rooms with head & Shower
- Air • Tanks • 2 Engines • 2/50 kw generators
- 2 compressors • 2 water makers

circle #172 on Reader Service Card

DIVING FREEDOM



Your Answer to overcrowded and overpriced high-rise hotels, needless hassles, and demanding schedules? Twelve informal cottages designed and priced for divers, 24 hour absolute unlimited diving on uncrowded boats and a superb coral drop-off only 100' from the dock.

CAP'N DON'S HABITAT
Bonaire, N.A.

For more information call (802) 496-5067 or write Habitat, P.O. Box 237, Waitsfield, Vermont 05673.

Name _____ Address _____
City _____ State _____ Zip _____

circle #170 on Reader Service Card

THE GUARANTEED DIVING VACATION AGAIN... NO SURPRISES. NO EXCUSES.



**HOLIDAY INN, GRAND CAYMAN and
BOB SOTO'S DIVING, LTD.
PROUDLY ANNOUNCE THE
CONTINUATION OF THE WORLD'S FIRST
GUARANTEED DIVING VACATION**

The Hotel—Spacious rooms, pool, bar, excellent food & entertainment all located on beautiful 7-mile beach.

The Diving—Bob Soto's Diving Ltd., the island's only PADI 5-star diving facility picks you up in the most comfortable, drop-front boats available.

Package Includes—7 nite accommodations • 10% service charge in lieu of gratuities • 6% gov. tax • breakfast daily • 6/2 tank dives • 1 night dive • plus much more

\$534.00

per person
double occupancy
Effective April 21 through
December 15, 1984

Three nite package
per person, double occupancy

\$237.00

Five nite package
per person, double occupancy

\$404.00

Your dive boat will operate every day—**GUARANTEED**
Your room reservations are confirmed every day—**GUARANTEED**
Or your one-week diving vacation is free—**GUARANTEED**

**Cayman
Airways**



RON KIPP'S
Bob Soto's
DIVING LTD.



1-800-421-9999

circle #174 on Reader Service Card

THE ONLY ALTERNATE AIR SOURCE

We took the best of
both—the PONY
BOTTLE and the
OCTOPUS and
created the
BETTER SYSTEM.

THE
**XTR-AIR
E.B.S.**
THE
**ULTIMATE
BACK-UP
SYSTEM**

2" diameter
x 15" long, built-in
regulator, 2 cu. ft.
tank delivers 30
or more breaths
at surface, weighs
2 pounds.

CONTACT
your Dive Store
or

SUBMERSIBLE SYSTEMS INC. 16442 Gothard St., Unit G
Huntington Beach, CA 92647 - Phone 714/842-6566



circle #175 on Reader Service Card

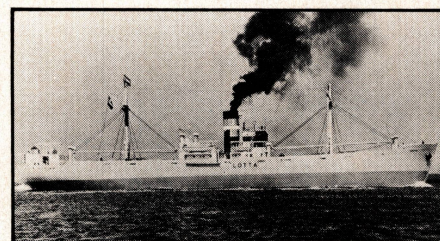
NEW JERSEY WRECKS

(Continued from Page 88)

through one of the many cracks in the hull. Her rudder is very picturesque when the light hits it in 120 feet of water. With visibility exceeding 70 feet, photography would be worth the effort. Though mostly visited for her portholes, her interior would be worth seeing, but can only be reached through one of the larger cracks in the hull.

San Jose: This 3,360 ton freighter was owned by the United Fruit Company. She sank after being rammed by the S.S. *Santa Elisa* on January 17, 1942, 18 miles southeast of Atlantic City. She now lies on 108 feet of water and is broken up, but still stands 30 feet high. Portholes can be found just lying out in the sand. Wooden crates can also be found, for her cargo was fruit. There is about five inches of marine growth on the wreck, not necessarily being mussels, even though they are present. Because of this fish are very plentiful, which makes her popular with spearfishermen. However, she is mainly known for the large amount of lobster within and around her.

Tolten: This 1,858 ton Chilean freighter was torpedoed on March 14, 1942. Her stern and mid-sections are completely intact, even though her hull is broken up.



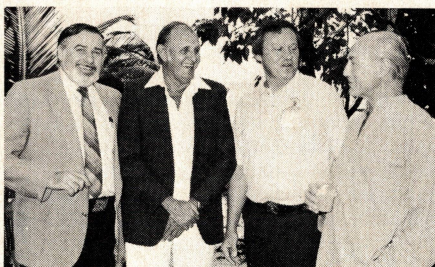
She lies in 95 feet of water, standing 40 feet high, in a SE/NW direction.

She is very popular with experienced divers because she is intact and is easily penetrated and her corridors are wider than most. Her wreckage is encrusted with anemones and visibility is always excellent. Large fish can usually be seen and spearfishing is popular. This wreck is also good for lobster. In the summer of 1982, a 13 pound claw was brought up. The lobster from which it came still exists. Smaller varieties are also very plentiful. She is a prime location for lobster pots, and it is an extremely unethical practice to take or rob these pots.

In conclusion, New Jersey wreck diving should not be overlooked because of the poor conditions that are prevalent. Every dive is a unique experience, and you will never come up empty handed. You will always have a great story to tell your dive buddies. So make it a point to put New Jersey on your summer vacation list. 

SCUBABOWL EVENTS

Several special new events have been added to this year's Scubabowl '84 in Grand Cayman. Both the program and the social schedule have been redesigned to more effectively show off the island's assets. The program will teach participants how to organize and market dive travel for profit. Each day has a specific theme and objective. Many of the sessions will be conducted as workshops



Paul Tzimoulis, Bob Soto, Ron Kipp and Stan Waterman discuss Scubabowl.

with audience participation and application exercises for individual businesses.

Day 1—Noted experts from the dive industry, such as SKIN DIVER's Paul Tzimoulis and PADI's Al Hornsby will share their insights and expertise on identifying the market and developing marketing strategies.

Day 2—Experienced travel organizers will show participants step by step, in workshop format, how to organize and operate their own travel planning, booking and tour leading.

Day 3—Experts will present a series of lectures highlighting tourist attractions and other aspects of Cayman culture, including the customer services available.

Day 4—Several leaders in the field will share effective concepts in resort options for diver education.

Day 5—Participants are encouraged to tour the island and visit other properties and points of interest.

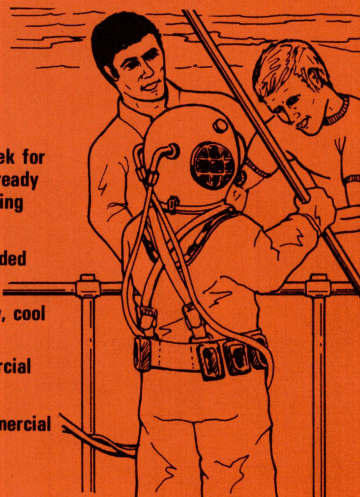
Day 6—On this last day of seminars there will be a panel of successful dive travel organizers available to answer questions and share their tips for success. Paul Tzimoulis will help participants personally experience closing a sale.

The evening social events planned for Scubabowl '84 will blend old favorites such as the dinner/dance at Sunset House and a gala closing party at the Royal Palms Hotel with a special free evening for participants to sample some of Cayman's finest restaurants at special discount rates. There is also a special social event in the works involving the governor and several other Cayman VIPs. In addition to these events, many of the retail stores have also become patrons of Scubabowl and will be offering special discounts to this year's participants.

Register now for Scubabowl '84 by contacting the Cayman Islands Department of Tourism, 250 Catalonia Avenue, Suite 604, Coral Gables, FL 33134; (305) 444-6551.

You, Too, Can Become A Commercial Deep Sea Diver

- Coastal offers you the lowest tuition: \$1,595. Why pay more? Our graduates work at the same starting wages along side students who paid \$4,000 to \$6,000 tuition at other schools — Be sure you compare values!
- You'll train full-time: 8 hours a day, 5 days a week for *only* 11½ weeks to earn your diploma. You'll be ready for employment, not out of work, paying more living expenses for 6 months or two year courses
- We teach you all 4 phases to become a well-rounded diver: salvage, research, construction, oil field.
- You'll dive in ideal weather year around. No snow, cool summers.
- You'll work in 11 to 16 different types of commercial diving gear.
- We are one of the few schools that teaches commercial hard hat used in salvage and construction.
- We stress safety. Our school has *never* had a major accident or fatality.
- In 35 years of operation Coastal has trained over 7,000 commercial divers.
- Join the ranks of Coastal's commercial diving graduates working worldwide. Write today for details. No obligation.



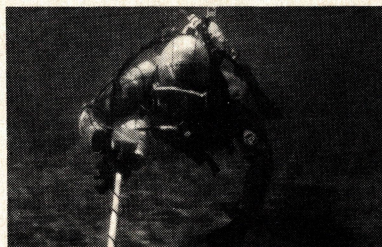
Coastal School Of Deep Sea Diving

320 29th Avenue
Oakland, CA 94601
(415) 532-4211

Coastal School of Deep Sea Diving. SD-94
320 29th Avenue, Oakland, CA 94601
For full details and application form,
enclose \$2 U.S. for handling and postage.
Name _____
Address _____
City _____
State _____ Zip _____

circle #176 on Reader Service Card

START TREASURE DIVING...



...WITH TOP OF THE LINE EQUIPMENT

The Fishers Pulse Detectors

- Complete line of underwater metal detectors
- Hand-held models
- Boat towed (Magnetometers also available)
- Used the world over—the divers' choice for 20 yrs.
- Models can be upgraded later if desired
- Two year warranty
- Purchased by the Navy, Coast Guard and FBI
- Priced from \$325
- Engineered for disassembly without warranty loss



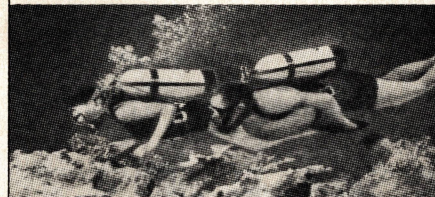
For more information about Fishers' fine products write for our free catalog.

J.W. FISHERS MFG. CO.

ANTHONY ST. TAUNTON, MASS. 02780
(617) 822-7330 CALL COLLECT FOR INFO.

circle #177 on Reader Service Card

For spectacular snorkeling and scuba, look beneath our surface.



In all the world, no underseas world surpasses ours. Make Curaçao's Las Palmas your headquarters for exploring the wrecks and reefs off secluded beaches and bays nearby. And bask in the warm Dutch hospitality of our complete vacation complex. Equipment for rent. Instruction arranged.



LAS PALMAS

HOTEL AND VACATION VILLAGE

Curaçao, Netherlands Antilles.

For reservations, call LRI toll-free
at 800-223-0888.

(In New York State, 800-522-5455;
in New York City, (212) 841-1111.)

circle #178 on Reader Service Card

THE M19-A (RIGHT) BB SUBMACHINE GUN



THE M19-AMP (LEFT) BB SUBMACHINE PISTOL

Even a do-it-yourself army has trouble deciding which is the best—but face it, both the M19-A and M19-AMP have the same high fire power rate of over 3,000 BB's per minute with an effective range of over 50 yards! They're both tough, too, and they're simple to load. Just remove the filler cap and pour in the BB's (3,000 max), pop in the compressed air or convenient 1 pound can of standard auto air conditioning freon and you're set for muster! So get in on the auto action and get your M19-A or M19-AMP today! Better yet, get 'em both and end the argument.

**\$39.00 each or
both for \$75.00**

OFFER VOID WHERE PROHIBITED BY LAW.
FL RESIDENTS ADD 5% SALES TAX

SEND TO:
LARC INT., P.O. BOX 460, MAITLAND, FL
32751
(305) 339-6699

THIS MUST BE SIGNED.

SD-09

I AFFIRM THAT I AM 18 YEARS
OR OLDER.

SIGNED _____

SEND ME: ☐ M19-A ☐ M19-AMP ☐ BOTH

PRINT OR TYPE THE FOLLOWING:

NAME _____

STREET _____

CITY _____

STATE _____

ZIP _____

Rescue Technique

BY DENNIS GRAVER

After scores of instructor courses, seminars, workshops and conferences where diving rescue was taught, and after years of teaching rescue techniques at the same type of events, I was aware of three fundamental methods of in-water artificial respiration: mouth-to-mouth, mouth-to-nose and mouth-to-snorkel. Each has its application, and it would be desirable for all experienced divers to know when each of the methods is to be used and to have the skills to administer each. Unfortunately, all three methods have problems. Divers are taught ways to minimize the problems, but the difficulties cannot be eliminated. In-water artificial respiration is exhausting. It is difficult to keep water from entering the victim, especially during mouth-to-mouth. It is unpleasant and may even be repulsive. It is difficult in rough water and especially plagued with problems during surf passages. Mouth-to-snorkel minimizes a few of these problems, but the technique is not easy to master and it creates some problems of its own.

There is now a new and better way to



administer artificial respiration in the water. It combines the advantages of all other methods without producing new problems. This new technique is easy to perform and can be learned quickly. It involves the use of a simple device known as a pocket mask. Made by Laerdal, the manufacturers of Resusi-Annie, it is popular with paramedics and other emergency personnel because it is easy to use and fits people universally. The mask is compact, stores flat and pops open for use. It comes with instructions which should be read before the mask is used.

The ventilation technique recommended by the manufacturer is different than that for standard artificial respiration and has some in-water advantages as we shall soon learn. The rescuer positions himself or herself at the head of the victim, facing toward the victim's feet. The

FAMOUS "SKINDIVER" CUSTOM WET SUITS

NYLON I

NYLON II

61⁹⁵/101⁹⁵

Order direct and SAVE!
Satisfaction guaranteed

Men's or women's custom tailored to your measurements with high pants and collar for super warmth. Finest wet suit material, completely nylon lined. Features sewn seams, noncorrosive zipper and twist locks. 1/4" or 3/16" material — mark choice below. Just fill in your measurements and mail your order. Quick delivery with Visa, Mastercard, and M.O. Checks take 3 weeks to clear.

1/4" 3/16"

Sex Age

Height

Weight

___ Ankle

___ Calf

___ Knee

___ Thigh

___ Hips

___ Waist

___ Chest

___ Neck

___ Wrist

___ Forearm

___ Elbow

___ Biceps

___ Ankle to Knee

___ Ankle to Crotch

___ Ankle to Waist

___ Shoulder Seam
to Crotch

___ Wrist to Elbow

___ Bra and Cup Size

___ Wrist to Armpit

___ Hat Size

Include MC - VISA

Exp. Date

☐ GLOVES \$12.95

☐ BOOTS \$12.95

☐ HOOD \$11.95

☐ Add \$3.00 for each Nylon II Accessory

MEN OVER 225 lbs. AND/OR 6'4" ADD \$35.00

WOMEN OVER 175 lbs. AND/OR 5'10" ADD \$35.00

\$6.00 for postage, \$8.50 Canada, \$15 APO, FPO. No COD.

WA State add sales tax. Clip and mail this coupon today.

To: Skin Diver Wet Suits

1632 S. 250th

Kent, Washington 98032-5499

Name _____

Address _____

City _____

State _____

Zip _____

circle # 179 on Reader Service Card

victim's airway is opened with a triple maneuver—head lift, jaw thrust and chin extension. The maneuver is detailed in the instructions supplied with the mask. The lower (flat end) rim of the mask is then placed on the chin and pressure is applied to the chin to hold the mouth open while the mask is seated in place. The



mask is clamped to the patient's face with the thumbs while the fingers maintain a grasp on the patient's jaw. This C-clamp position holds the pocket mask in place while maintaining a good airway.

The pocket mask has a small tube on top which allows coupling with standard resuscitation equipment. For mouth-to-mask breathing, a rescuer simply blows into the mask through the tube at the standard rate for artificial respiration. This allows ventilation to take place through both the mouth and the nose, another advantage of the device.

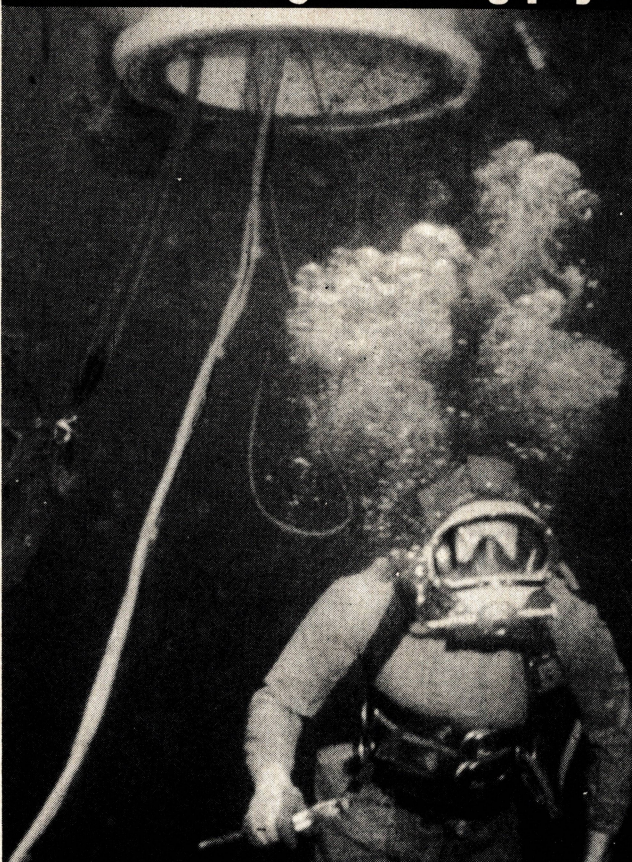
When CPR is required and the rescuer must work alone, he/she can work from the side of the patient. The mask can be strapped in place with the elastic band supplied with it. Again, there are more details contained in the instructions supplied with the mask. I want to point out the value of the mask for in-water rescues.

In April of 1981 I was conducting a PADI diving rescue workshop in Hawaii. We were using a problem solving, idea sharing learning approach. Skip Kirkwood, a local emergency specialist, had contacted me in advance and had offered to provide an orientation to resuscitators and other emergency equipment. Skip was showing us a pocket mask and explaining how he and his associates preferred it over other masks when the idea struck me that the mask would work excellently in the water. We tried it immediately and the experiment was successful.

Excited, I wrote down the name and address of the manufacturer and mailed a letter to them right after returning to the mainland. I received no reply. I finally obtained a pocket mask of my own through a medical supply house and discovered that the manufacturer only distributes the masks to outlets which carry the full line of Resusi-Annie equipment.

To test the technique further, I introduced the pocket mask to the staff and candidates of PADI International College in San Diego. They started including training in use of the mask as part of their regular rescue workshops and found

NORTH SEA CERTIFIED Tough training pays off.



☐ United States Patented Training Techniques ☐ Deepest Training Programs in the United States ☐ North East Diving Accident Network (D.A.N.) Facility ☐ Graduates Eligible for British and Norwegian North Sea Commercial Diving Certifications ☐ Financial Aid Available ☐ Before you commit to commercial diver training, you owe it to yourself to review our programs. It could make a difference in your future. For more information on the tough training that pays off with worldwide employability, call today.

Professional Diving School of New York

222 Fordham Street, City Island, New York 10464

Call Toll-Free

800-223-8000

In New York State: (212) 885-0600/Telex: 147242 IUCINCNYK

In Europe: Howe Moss Drive, Kirkhill Industrial Estate
Dyce, Aberdeen, Scotland

Phone: 0224-724838/Telex: 739272 IUCSCO

circle #180 on Reader Service Card



Aquala INC.

TRUE DRY SUITS

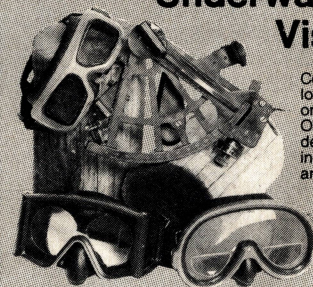
offering protection from cold and deep water dives, contamination, chemicals, etc. Easy front tunnel entry or water and gas proof shoulder zipper. Styles available for bay hunting, canoeing, surfing, yachting and custom made. Warranty.

AQUALA, INC.

P.O. Box 416 Carthage, N.C. 28327
(919) 947-3130

circle #181 on Reader Service Card

"For Perfect Underwater Vision"



Contact your local dive shop or Aquatic Optics for detailed information and prices.

Aquatic Optics

121 South Central Expressway • Richardson, TX 75081
(214) 238-7818

circle #182 on Reader Service Card

DISCOUNT DIVERS' CHRONOS

1 YEAR WARRANTY — 30 DAY TRIAL

**INNOVATIVE TIME
500 METER
7-YEAR \$4995
X-SHOCK**

FEATURING —

- Waterproof to 1650 feet
- 33-foot shock-proof
- Night light
- 7-year battery life
- Electronic calendar, AM/PM
- 1/100 second stopwatch with repeat after 12 hours
- Split/lap time/time out
- 12/24 hour time
- 24-hour alarm system, hourly chime
- 3/4 oz. polysulfone case and band



1650 FT.

**ALSO AVAILABLE:
CASIO 200 METER "G-SHOCK" .. \$49.95**
(660 feet, stopwatch, countdown timer)



660 FT.

**ARTECH
200 METER
PRO DIVER'S
CHRONO
SEE WHAT
YOU GET — \$5995**

- Waterproof to 660 feet
- High quality Swiss ESA quartz movement
- Guaranteed quality equal to Heuer, Seiko, Citizen
- One-way ratcheted bezel
- Screw-in crown
- Luminous and deeply set hands and dial
- Automatic calendar
- All stainless case
- Scratch-resistant crystal
- Black rubber diver's wristband
- Long-life battery



660 FT.

**CASIO DW-200
200 METER
CHRONO \$2995**

- Waterproof to 660 feet
- 5-year battery life
- Dual time, 12/24 hour time
- Electronic calendar, AM/PM
- 1/100 second stopwatch with repeat every hour
- Split/lap time/time out
- 12-digit LCD display simultaneous with alarm, chronograph, timer or calendar
- Countdown timer and 4 independent alarms
- 3/4 oz. polysulfone case and band
- Night light



330 FT.

**LORUS ER011
100 METER
LADIES' CHRONO
SEE WHAT
YOU GET — \$3995**

- Waterproof to 330 feet
- Long-life battery
- Electronic calendar, AM/PM
- 24-hour stopwatch with 1/100 second readout
- Split/lap time/time out
- Daily alarm and hourly time signal
- Stainless steel case and band
- Made by K. Hattori, manufacturer of Seiko and Pulsar

WHY YOU SHOULD ORDER FROM ON THE RUN

We're America's largest single source of quality marine watches. You get a genuine 1-year warranty and a 30-day money-back guarantee. Most orders are filled within 48 hours. You also get a 24-hour toll free number, customer service number, and a legitimate business address (not just a P.O. box).

— FOR FASTEST ACTION —
CARD HOLDERS ORDER TOLL-FREE
(800) 437-4385

Credit card holders may use toll-free number above or send check or money order plus \$2.50 for each watch. Add an additional \$2.00 for U.P.S. air delivery. North Dakota residents add 4% tax.

On The Run

107 Roberts St., Dept. SK-9
P.O. Box 67, Fargo, ND 58107
Telephone (701) 232-9400

Write for a free one-year subscription to our catalog of timepieces and hi-tech items for better living.

CS27-1185

© 1984 ON THE RUN

RESCUE TECHNIQUE

it to be as simple to use and as effective as I had found it to be in Hawaii.

I have presented the pocket mask technique at several conferences and its acceptance has been instantaneous and overwhelming. I almost wish I were a distributor for the product!

With the history and development behind us, let's now address the procedure for using the mask in the water.

There is a pre-inflated vinyl cuff on the mask which can be easily carried in the



pocket of a buoyancy control device. The cuff compresses under pressure but re-expands to its normal volume upon surfacing. In an emergency, the mask is simply pulled from the BC pocket and popped open. It is ready for instant use. The fit is truly universal, even working well on victims with mustaches. The mask helps prevent the spread of disease because it eliminates direct contact between rescuer and victim. Perhaps its biggest advantage is in keeping water from entering the victim, one of the most serious problems associated with in-water ventilation.

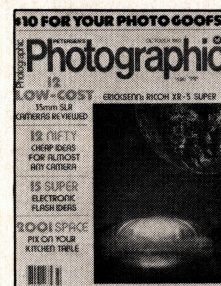
In most instances the rescuer should work at the top of the victim's head, as previously described for land usage of the mask. This maintains a good airway, holds the mask securely in place, allows the victim to be towed easily and permits the rescuer to kick freely. For rough water situations, surf passages or instances where sure control of the victim is necessary, the "do-si-do" position can be used. This requires some practice in order to be effective. It is amazing, however, how quickly divers learn to administer artificial respiration in the water with the pocket mask as compared to other forms of ventilation.

The transparency of the mask allows monitoring of the victim's mouth and lips. This is excellent for observing coloration or vomitus. The volume of the mask is quite small, so carbon dioxide build-up is not a problem.

The real value of the strap comes into play after the victim is removed from the water. There are two models—one with an oxygen inlet valve and one without. They are priced at \$15 and \$10, respectively. The mask with the inlet valve can

(Continued on Page 109)

PETERSEN'S Photographic MAGAZINE BRINGS THE WORLD OF PHOTO- GRAPHY INTO FOCUS.



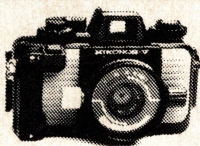
You provide the equipment, skill, and talent, and Petersen's PHOTOGRAPHIC will provide the expert guidance needed to bring them all together. Only the most current, up-to-date information is presented in a colorful, practical "how-to" format with one single goal in mind: to help you take a great photograph we can both be proud of.

If you'd like to have a cleaner, crisper, clearer understanding of your favorite hobby or profession, pick up Petersen's PHOTOGRAPHIC and bring your world of photography into focus.

Now On Sale At Your Local Newsstand



Helix is the source for underwater photography.



The new
Nikonos V
is now
available!

NIKONOS CAMERAS & LENSES

NIKONOS 5 WITH 35MM F2.5 LENS	CALL
NIKONOS 5 BODY ONLY	CALL
15MM NIKKOR U/W LENS	679.00
NIKKOR FINDER FOR 15MM U/W NIKKOR	199.00
18MM F3.5 SEA & SEA LENS FOR NIKONOS	369.00
SEA & SEA OPTICAL FINDER 18/28/35	48.00
28MM F3.5 U/W NIKKOR LENS	169.00
28MM F2.8 NIKKOR FOR ABOVE WATER USE ONLY	129.00
35MM F2.5 U/W NIKKOR LENS	79.00
80MM F4.0 U/W NIKKOR LENS	169.00

NIKONOS ACCESSORIES

NIKONOS CLOSE UP KIT	129.00
NIKONOS EXTENSION TUBE SET(2 TUBES, 3 FRAMES)	89.00
OCEANIC NET 300 EXT TUBE SET	95.00
IKELITE 3 TUBE & 3 FRAMER SET	110.00
NIKONOS SB-101 FLASH UNIT	289.00
NIKONOS SB-101 FLASH UNIT W/CASE	309.00
NIKONOS SB-102 FLASH UNIT W/CASE	CALL
28MM SPORT FINDER	11.60
35MM/80MM SPORT FINDER	12.00
80MM OPTICAL FINDER (ABOVE WATER ONLY)	57.50
28MM/35MM OPTICAL FINDER FOR U/W USE	85.00
CARRYING CASE NIKONOS 4 & 5	24.95
PC ADAPTER FOR NIKONOS 3 OR 4	19.50
SW-101 DIFFUSER FOR SB-101	13.50
LENSHOOD/FILTER HOLDER FOR 35MM/28MM	4.25
REAR LENS CAP 28MM, 35MM, 80MM	4.50
FRONT LENS CAP 28MM, 35MM, 80MM	4.50
IKELITE OPTICAL VIEWFINDER W/MASKS	59.00
HYDRO-PHOTO T-1, T-2, OR T-3 CLOSE-UP LENS	39.95
HYDRO-PHOTO CLOSE-UP LENS FOR 28MM NIKKOR	39.95
HYDRO-PHOTO FOCUSING WAND	14.50
HYDRO-PHOTO FRAMER 35	14.50
HYDRO-PHOTO FRAMER 28	14.50

UNDERWATER FLASH UNITS

HELIX AQUALASH 22 W/SENSOR, ARM, TRAY & CORDS	299.00
IKELITE SUBSTROBE M W/O CORDS	105.00
IKELITE SUBSTROBE M W/MONITOR, W/O CORDS	160.00
IKELITE SUBSTROBE 75 W/CHARGE, W/O CORDS	265.00
IKELITE SUBSTROBE 150 W/O CHARGER OR CORDS	355.00
IKELITE SUBSTROBE 150L W/MONITOR, W/O CORDS	410.00
IKELITE FLASH MONITOR #4054	63.95
OCEANIC 2000 (NIK 2, 3, OR 4)	119.50
OCEANIC 2001 (NIK 2, 3, OR 4)	299.00
OCEANIC 2001-S (BO ONLY)	329.00
OCEANIC 2003-2 (NIK 2, 3, OR 4)	315.00
OCEANIC 3002 W/O CORD	390.00
OCEANIC 3003 W/O CORD	359.00
POPULAR F-3 (TOSHIBA TM-2)	169.00
SONIC RESEARCH SR-2000 OUTFIT	295.00
SUBSEA MARK 30 (NIK 2 OR 3/4)	139.00
SUBSEA MARK 100 (NIK 2 OR 3/4)	259.00
SUBSEA MARK 150 (NIK 2 OR 3/4)	419.00
SUBSEA MARK 225XL (NIK 2 OR 3/4)	539.00
SUBSEA RECHARGEABLE 510 VOLT BATTERY, CHARGER	175.00
SUNPAK MARINE 32 (NIK 3/4 ONLY)	279.00
CL-2 NICAD PACK FOR SUNPAK 32	29.00
QBC-5 CHARGER FOR CL-2	24.75
YS-20 (NIK 2, 3/4 OR SEALOC)	149.00
YS-50M (NIK 4 CONNECTOR)	237.00
YS-50A (NIK 4 CONNECTOR)	299.00
YS-150 (NIK 4 CONNECTOR)	429.00
VIVITAR 283 W/IKELITE HOUSING #4228	129.50
VIVITAR 285 W/IKELITE HOUSING #4230	139.50

HANDIMEX - SEA & SEA 35MM

S&S PC-35 MOTOR-MARINE 35MM CAMERA	159.50
WL-24 WIDE ANGLE ADAPTER FOR PC-35	125.00
CU-4 MACRO LENS W/WAND FOR PC-35	46.50
CU-3 CLOSE-UP LENS (NO WAND) FOR PC-35	24.00
S&S UNIVERSAL TRAY W/GRIP FOR PC-35 OR NIK 4	64.00
SEALOC BULKHEAD CONNECTOR FOR PC-35	32.00
HANDIMEX AMPHIBIAN 35MM CAMERA	159.50
FLASH SYNC BULKHEAD FOR AMPHIBIAN OR SEA & SEA	32.00

(NOTE ALL SEA LOC AND NELSON CONNECTORS WILL FIT THE HANDIMEX 35MM AMPHIBIAN CAMERA SYNC ADAPTER. HANDIMEX CAMERAS HAVE BUILT IN LIGHT METERS, THE SEA & SEA CAMERAS DO NOT HAVE LIGHT METERS)

SUPER 8 MOVIE CAMERAS

ELMIG NAUTICA 18 FPS MODEL	189.00
FUJI P-2 SINGLE 8 CAMERA W/HOUSING	99.00

HELIX HOUSINGS FOR AUTOFOCUS 35MM

HELIX HOUSING FOR NIKON L35AF	74.50
HELIX HOUSING FOR CANON SURE SHOT AF35MII	74.50
HELIX HOUSING FOR CANON SURE SHOT AF35M	74.50
HELIX HOUSING FOR PENTAX PC35AF	74.50
HELIX HOUSING FOR MINOLTA AFS	74.50
IKELITE HOUSING FOR SUPER SURE SHOT #5620	79.95

AUTOFOCUS CAMERAS

CANON NEW SURE SHOT AF35MII	138.00
CANON SURE SHOT QUARTZ DATA	199.00
CANON SUPER SURE SHOT AF35ML	169.00
MINOLTA AF-SV TALKER	139.00
NIKON L35AF (ADD \$10.00 FOR CASE)	139.00
PENTAX SPORT PC35AF	99.00
YASHICA AUTOFOCUS S WITH CASE	89.00

35MM SLR HOUSINGS

HELIX KAMBA HOUSING FOR CANON AV-1, AE-1, A-1	339.50
OCEANIC HYDRO 35 FOR NIKON F3 W/BO BULKHEAD	839.00
HUGBOLT UPOMARIN METAL HOUSINGS FOR OM-1, OM-2	
NIKON BM, FE-2, F3 & CANON, SWISS PRECISION & WORKMANSHIP, BO CONNECTOR	CALL
IKELITE HOUSING FOR NIKON F2, F3 W/ACTION FDR	199.00
IKELITE HOUSING FOR NIKON FE2/PM2 SUPEREYE	239.95
IKELITE HOUSING FOR CANON FIN W/SPEEDFINDER	199.00
IKELITE HOUSING FOR PENTAX ME, ME SUPER, ME-F	239.95
IKELITE HOUSING FOR MINOLTA X-700	239.95
IKELITE SLR MACRO OR EXTENSION PORT	23.95
OCEANEYE PROF. HOUSING FOR NIKON F2 OR F3 W/MOTOR	
OR CANON FIN W/MOTOR; W/DOME PORT, BO CONN.	1255.00
SEA & SEA ALUMINUM HOUSING FOR NIKON F2, DOME	795.00

DISC & 110 CAMERAS & HOUSINGS

PC-1 SEA & SEA POCKET MARINE 110	\$109.50
CU-1 MACRO LENS FOR PC-1 W/WAND	39.95
FB-1 BULKHEAD FLASH CONNECTOR FOR PC-1	32.00
YS-20 FLASH FOR PC-1	119.50
CA-1 MOUNT ARM PC-1 TO YS-20	12.00
COMPLETE CAMERA SYSTEM PC-1, FB-1, YS-20, CA-1	275.00
HANIMEX AMPHIBIAN 110	89.50
MACRO LENS FOR AMPHIBIAN W/WAND	35.00
IKELITE HOUSING #5240 FOR KODAK DISC CAMERA	
MODELS: 2000, 3000, 3100, 4000	43.95
IKELITE HOUSING #5265 FOR MINOLTA DISC 5	55.95
IKELITE HOUSING & KEYSTONE CAMERA PACKAGE 1050	79.50

HELIX SPECIAL!

IKELITE HOUSING & VIVITAR 845 110 CAMERA	79.50
--	-------

USED EQUIPMENT

NIKONOS 2 WITH 35MM F2.5 UWN	185.00
NIKONOS 2 EVERYDAY CASE	9.95
15MM U/W NIKKOR LENS WITH FINDER	665.00
DACOR PAR-1 1:1 EXT TUBE & FRAMER	35.00
OCEANIC 2001/S SLAVE FLASH	269.00
SUNPAK MARINE 32 FLASH, NIK 4 CONNECTOR	189.00
SUBSEA MARK 150 (BO)	345.00
TOSHIBA TM-1 (NIK 2 CONNECTOR) W/TRAY	89.00
SEACOR 21MM F3.3 LENS FOR NIKONOS	289.00
IKELITE HOUSING FOR VIVITAR 283 FLASH	59.00
IKELITE HOUSING FOR CANON 155A FLASH	59.00
IKELITE TRAY & FLASH PAC FOR NIK 4	29.00
IKELITE T-CONNECTOR (4109)	18.00
IKELITE SUBSTROBE M, TCS CABLE, (DEMO)	99.00
VIVITAR 835, 110 CAMERA W/TRE HOUSING	49.00
AMF SWIMASTER STROBE FOR NIKONOS III	87.50
IKELITE HOUSING FOR CANON F-1 W/SPEEDFINDER	
AND DOME PORT	179.50
IKELITE HOUSING FOR NIKON F2 WITH MOTOR	195.00
IKELITE HOUSING FOR OLYMPUS OM1, OM2, OM10	149.00
HASSLEBLAD ALUMINUM HOUSING FOR SWC	975.00
OCEANIC OS-2000 WITH TRAY AND ARM	
FOR NIKON OS III	165.00
OCEANIC OS-2000 WITH TRAY AND ARM	
FOR NIKON OS IV	155.00

USED EQUIPMENT IS SOLD SUBJECT TO YOUR APPROVAL.

PHOTO/DIVE LIGHTS (NON RECHARGEABLE CELLS NOT INCLUDED)

HELIX 200 PHOTO/DIVE LIGHT (2"D CELLS)	14.95
HELIX 205 MINI PHOTO/DIVE LIGHT (2"AA CELLS)	9.75
IKELITE MINI-C LIGHT STD (4"C CELLS)	15.95
IKELITE MINI-C HALOGEN TYPE (4"C CELLS)	19.95
IKELITE MINI-C HOUSING	8.50
OCEANIC EMTILE (A WHALE OF A LIGHT, 2"C CELLS)	9.95
TOSHIBA K-132 (4"D CELLS) KRYPTON BULB & SPARE	24.95
TOSHIBA K-133 (4"D CELLS) HALOGEN BULB & SPARE	29.95
TOSHIBA REPL. HALOGEN BULB TB 4.8 V4W	6.25
UK SUPER-Q RECHARGEABLE W/CHARGER	47.50
UK QXL RECHARGEABLE W/CHARGER	59.00
UK QXL NON-RECHARGEABLE (2"C CELLS)	17.95
DARREL-ALLAN DA-250	35.00
AQUALUME DA-414 KRYPTON/HALOGEN (3"C CELLS)	19.50

EQUIPMENT CASES

1500 PELICAN CASE (17X12X6.5) BLACK ONLY	64.50
300 SUBSEA CASE (18X13X12)	165.00
299 NEW SUBSEA CASE (18X13X8)	150.00
3939 IKELITE CASE (13X17X7)	47.95
P30D ADAPTA CASE (18X14X8)	76.00

HELIX UNDERWATER PRODUCTS

6" BO TO NIKON OS I, II	52.00
6" BO TO NIKON OS III, IV, V	52.00
10 FOOT BO MALE-FEMALE	95.00
20 FOOT BO MALE-FEMALE	99.00
O-RING SET FOR NIKON OS I, II	3.95
O-RING SET FOR NIKON OS III	3.95
UR-PRO MARINE FILTER, 58MM	42.50

METERS

SEKONIC L-158WH (HOUSING INCLUDED)	41.00
SEKONIC L-188WH (HOUSING INCLUDED)	54.00
SEKONIC L-164B MARINE METER	84.50
SEA & SEA LM-1	69.50
IKELITE HOUSING F/GOSSEN SUPER PILOT (NO METER)	39.95

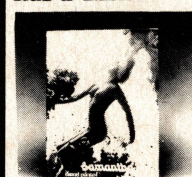
FILM AND PROCESSING

	1-19	20+
CP135-24 PRINT, 100 ASA	3.00	2.85
CP135-36 PRINT, 100 ASA	3.75	3.55
CM135-24 PRINT, 400 ASA	3.75	3.55
CM135-36 PRINT, 400 ASA	4.70	4.45
CP135-24 PRINT, 1000 ASA	4.25	4.00
CP135-36 PRINT, 1000 ASA	5.40	5.15
KM135-36 KODACHROME, 25 ASA	5.05	4.75
KM135-36P KODACHROME WITH PROCESSING	7.75	7.35
KR135-35 KODACHROME, 64 ASA	5.05	4.75
KR135-36P KODACHROME WITH PROCESSING	7.75	7.35
EN135-36 EKTACHROME, 100 ASA	5.55	5.25
EL135-36 EKTACHROME, 400 ASA	7.30	6.95
EKTA. SLIDE DUP. 135-36	4.65	4.40
RSP135-36 FUJICHROME, 1600 ASA	16.00	15.20
CU135-24 FUJI PRINT, 1600 ASA	4.80	4.55
RMA464 SUPER 8 KODACHROME, 40 ASA	5.80	
RMA464P SUPER 8 KODACHROME WITH PROCESSING	8.60	
ELA464 SUPER 8 EKTACHROME, 160 ASA	7.30	
PK-20 KODAK PROC. MAILER FOR SLIDES	3.25	
PK-36 KODAK PROC. MAILER FOR SLIDES	4.70	
DP-24 KODAK PROC. MAILER FOR PRINTS	8.50	
DP-36 KODAK PROC. MAILER FOR PRINTS	12.00	
CIBACHROME 5X8" PRINT FROM YOUR SLIDE	3.00	
CIBACHROME 8X10" PRINT FROM YOUR SLIDE	6.00	

VIDEO EQUIPMENT & HOUSINGS

HELIX STOCKS HOUSINGS FOR THE JVC GZ-S30, GZ-S50 CAMERAS & HR-CSU DECK & TM-P30 MONITOR AS WELL AS FOR OTHER UNITS. FOR FAST DELIVERY & PRICES ON TOP LINES OF VIDEO EQUIPMENT CALL HELIX!!

BOOKS OF INTEREST



Samantha
returns
in softcover.

SAMANTHA (NEW SOFT COVER EDITION)	19.95
ANEMONEFISHES OF THE WORLD	20.00
BUTTERFLY & ANGELFISHES, VOL. I	22.95
CARIBBEAN REEF INVERTEBRATES & PLANTS	29.95
THE CAVE DIVERS	10.00
DANGEROUS MARINE ANIMALS	15.00
DIVING MEDICINE	39.50
MARINE ECOLOGY	37.95
PACIFIC COAST NUDIBRANCHS	14.95
RED SEA DIVER'S GUIDE	15.95
SCUBA EQUIPMENT CARE & MAINTENANCE	9.95
SOUTH AFRICAN SHELLS	17.50
THE UNDERWATER PHOTOGRAPHER'S HANDBOOK	12.95

WE HAVE A 12 PAGE UP TO DATE LISTING OF BOOKS OF INTEREST TO DIVERS, SHELL COLLECTORS AND STUDENTS OF MARINE BIOLOGY. SEND A SELF ADDRESSED STAMPED \$10 ENVELOPE TO HELIX & REQUEST THE U/W BOOKLIST

3 for the
price of 2

Buy one Cibachrome color enlargement from a 35mm slide and get another enlargement of the same size at no extra charge.

REGULAR PRICES:

5x8" - \$3.00

8x10" - \$6.00

Be sure to ask for details on our Helix Photo/Dive Trips!

Are you on our mailing list? If you aren't, you're missing our informative Photo Diver News, Underwater Booklist and catalogs. So hurry and sign up now!

HELIX®

PRICES DO NOT
INCLUDE SHIPPING or
INSURANCE CHARGES.

All prices are subject to
change without notice.

HELIX Worldwide TELEX #701713
HELIX CGO UD

325 West Huron St., Chicago, IL 60610 (312)944-4400

For information and orders call our toll free number: 1-800/33 HELIX

Phone Central Last!

CENTRAL SKINDIVERS is a full time, full line pro shop with an olympic size indoor pool. **CENTRAL** has been in business 32 years and our sales and service departments are familiar with every Scuba diving item made.

How do you like this month's special? This is just an example of **CENTRAL'S** low, low prices. WE **GUARANTEE TO BEAT ANY ADVERTISED PRICE IN THIS MAGAZINE.**

Check around and when you've decided what you want, **CALL CENTRAL LAST.** We'll beat any price and with VISA or MASTERCARD we will ship same day. Call 516-826-8888 any day including Sunday and **CENTRAL** even will pay shipping in continental U.S.A. on most orders.

CENTRAL has advertised and non-advertised specials every month.

STABILIZING JACKET

Famous make
Low Pressure Inflator
"Travel" Kam Pack
Adjustable Sides

JACKET (M or L) \$149

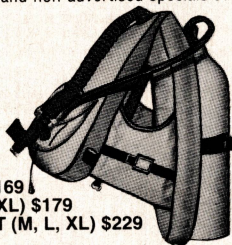
DELUXE JACKET (XL) \$169

DELUXE JACKET (M, L, XL) \$179

SUPER DELUXE JACKET (M, L, XL) \$229

Central pays shipping

B.C.'S AND STABIL JACKETS FROM
USDIVERS, DACOR, SEAQUEST AND
SEATEC ALSO ON SALE.



REGULATORS

SHERWOOD MAGNUM (\$190 list) \$119

DACOR PACER 900 (\$240 list) \$139

U.S. DIVERS CONSHOLF (\$220 list) \$129

CYKLOM MAXIMUM (\$220 list) \$145

OCTOPUS (\$90 list) \$49

Central pays shipping

MANY OTHER REGULATORS ALSO ON SALE

**CENTRAL guarantees
to beat any advertised price!**



U.S. DIVERS 80 K

Lifetime Warranty

80 Cu. Ft. Aluminum

100% Rust Free (list \$270)

U.S. DIVERS 80 K \$129

DACOR 80 K \$119

Plus Shipping

50 CU. FT. 71.2 CU. FT. and 94.6

TANKS ALSO ON SALE FROM DACOR
AND SHERWOOD

**"Central pays shipping"
is for continental
USA only.**



GAUGES

US DIVERS DIVEMASTER III (\$210 list) \$99

PRESSURE DEPTH COMBO (\$160 list) \$79

PRESSURE GAUGE (\$95 list) \$45

FARALLON DEPTH (\$64 list) \$29

Central pays shipping

PRESSURE AND DEPTH GAUGE FROM

USDIVERS, DACOR, OCEANIC AND

TEKNA ALSO ON SALE

BOTTOM TIMER

Luminous

Sweep Second Hand

Altitude Adjustable

Pressure Activated

(list \$89)

BOTTOM TIMER \$49

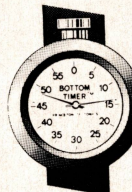
Central Pays Shipping

BOTTOM TIMERS AND WATCHES

FROM TEKNA, SEIKO, CHRONOSPORT,

AND HEUER ALSO ON SALE.

SUPER SPECIAL-DECO BRAIN \$350



**All prices are for mail order only
Store prices may vary.**

TURBO FLEX FIN

Jet Type Blade

Vented Clear Plastic

Adjustable Straps

FIN (S, M, or L) (\$53 list) \$39

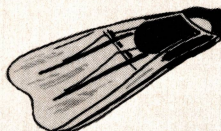
TRI-VUE SILICONE MASK (\$60 list) \$35

SILICONE VENT SNORKEL (\$18 list) \$14

NYLON 2 HARD SOLE BOOTS (\$40 list) \$23

NYLON 2-5 FINGER GLOVES (\$35 list) \$21

Central pays shipping



WATCHES

SEIKO AUTOMATIC DAY DATE (list \$165) \$129

CHRONOSPORT AUTOMATIC DATE (list \$295) \$125

HEUER QUARTZ DATE (list \$215) \$159

Central pays shipping

ALL OTHER WATCHES ALSO ON SALE.

BAGS

SMALL MESH BUG BAG \$8.95

MEDIUM MESH BUG BAG \$9.95

LARGE MESH BUG BAG \$12.95

SMALL MESH GEAR BAG \$15.95

MEDIUM MESH GEAR BAG \$19.95

LARGE MESH GEAR BAG \$23.95

GIANT CORDURA GEAR BAG \$59.95

Central Pays Shipping

ALL OTHER BAGS ALSO ON SALE



Central Skindivers

2608 Merrick Road, Bellmore, NY 11710

★ (516) 826-8888 • Open 7 days

160-09 Jamaica Ave., Jamaica, NY 11432

(212) 739-5772 • Open 6 days

Minutes from Manhattan and Kennedy Airport

Central is a PADI Facility
Lessons For Beginner Through Instructor.

Use and operation of life support equipment should not be undertaken without qualified and proper instructions in their use. This ad does not imply the sale of life support equipment through the mail.

FAMOUS SUITS

1/4" HIGH WAIST \$119.50

1/4" FARMER \$149.50

1/4" FARMER SUPERSTRETCH \$179.50

1/4" FARMER-PLUSH \$199.50

Central Pays Shipping

OTHER SUITS AND SHORTIES

FROM PARKWAYS, U.S. DIVERS,

HENDERSON, HARVEY, ETC.

ALSO ON SALE



Values to \$400

CENTRAL SKINDIVERS

2608 Merrick Rd., Bellmore, N.Y. 11710

Phone: (516) 826-8888

Name _____

Address _____

City _____ Apt. _____

State _____ Zip _____

Phone () _____

Please rush attached order! Sorry NO C.O.D.

\$ _____ enclosed (N.Y. add tax) or bill

my charge card (Minimum Charge \$75.00)

_____ Exp. Date _____

☐ VISA

☐ MasterCard

Signature _____

NEW YORK

Go West For Variety

BY SVEN STAU

Many divers have probably heard about diving in New York waters. But, have they ever heard about Western New York? Some of the state's best diving can be found here. WNY is considered, roughly, the city of Buffalo on Lake Erie, down the Niagara River to Fort Niagara on Lake Ontario.

The diving found here has a flavor all its own. You will not find coral reefs, tropical fish, water temperatures of 88°F, or



visibility of 50 feet. But, the thrill comes from seeing wrecks, finding old bottles, coins, war relics, motors, anchors, clay pipes and a host of other items.

There is a water temperature of 65 to 74°F from June to October. (Wear a full wetsuit to stay warm.) Water clarity depends on the weather. The average visibility is eight feet, but many times it will be 15 feet or more. Most of the diving will not be done at any great depth, usually less than 35 feet.

The first popular spot, where many students take their open water dives, is known as the Coinpile. This is just outside of Buffalo's Erie Basin Marina on the west side of McDonnelly's breakwall in Lake Erie. Over 10,000 coins have been found, including silver, gold and copper. These date mainly from the 1830s to 1860s, yet some are from the 1700s. Any type of coin may be found—large pennies, half-dimes, quarters, bust half-dollars, merchant tokens, Spanish reales and so on.

These coins could be those passengers tossed into the water as good luck as ships left Buffalo Harbor. Or, they could be from schooners rumored to be sunk at the Coinpile. Many schooner parts and steel or iron square nails are scattered over the bottom. Many clay pipes, large

padlocks with brass gates, bronze skeleton keys, musketballs, personal items of sailors, utensils for eating, bottles and other items are also found. Some years back, a miniature bronze signal cannon was found.

Water conditions at the Coinpile are usually favorable from spring through summer. The NW wind is calmest during the morning and evening. Seven inch waves are normal and many times the lake looks as smooth as a sheet of glass. During the fall months weather patterns can change without notice.

Depths here range from 13-23 feet and visibility averages 10 feet. You will definitely notice a current when anchoring your boat, so when decending follow your anchor line to the bottom. Currents are really no problem unless you surface downcurrent from your boat and have to swim against them.

New England Divers Sept. Super Savers

REGULATORS

Sherwood Magnum	110.00
Sherwood Octopus	54.95
Sherwood Blizzard	119.95
Dacor Pacer 900	134.95
Dacor Octopus	69.95

TANKS & BACKPACKS

Aluminum 80 cubic foot Tank	
with K-valve	109.95
Tank Boot	4.95
Travel Pac or Cam Pac	29.95

WETSUITS & ACCESSORIES

Nylon II Farmer John Suit	99.95
Parkway Omni Thermoflex	
Farmer John &	
Jacket Suit	159.95
New Plush Lined Thermoflex	
Farmer John &	
Jacket Suit	199.95
Nylon II Hardsole Boots	18.95
Nylon II Five-Finger Gloves	14.95
Nylon II Three-Finger Gloves	22.95

BUOYANCY COMPENSATORS

Jacket Style B.C. with	
inflator & backpack	129.95
Pro-Style Jacket B.C. with	
inflator & backpack	185.00

GAUGES

★ SPECIAL! Combo Pressure	
Depth Gauge	59.95
Dacor Pressure & Depth Gauge ..	74.95
Dacor Pressure and	
Max Depth Gauge	84.95
Dacor Pressure, Max Depth	
and Compass	94.95
Pressure Gauge	39.00
Pro Compass	19.00

MASKS, FINS & SNORKELS

Wraparound Mask	26.50
Dacor Vista or Mini-Vista Mask ..	26.50
Dacor Nautilus (DM23) Mask ..	24.00
Dacor Silicone Vista Mask	
or Silicone Mini-Vista Mask ..	45.00
Dacor Silicone Turboflex Snorkel	12.00
Dacor Conture or Straight Snorkel	8.50
Dacor Turboflex Fin	35.00
Vented Power Fin	22.95

ACCESSORIES

U.S. Divers Nordic Knife	14.95
Wenoka Divers Tool	26.50
NED Large Gear Bag	
w/side pocket	35.00
Break-apart Travel Spear and Case.....	45.00
Break-Apart Float & Flag.....	15.95
Prices do not include shipping costs.	
Super QXL (non-rechargeable) ..	18.95
Underwater Kinetics UK600	
Rechargeable	65.00
Medium Catch Bag	6.95

**Orders accepted only on our
TOLL FREE NUMBER
1-800-343-8122
CALL FOR FREE CATALOG**

Underwater Life Support Systems are potentially dangerous to a non-trained user. These include scuba tanks, regulators and buoyancy compensators. This does not constitute an offer to sell these items via mail order.

**Each Retail Store listed below offers its own
spectacular sale each month. Please visit your
local store to take advantage of their specials
and save!**

WEST COAST

San Francisco
398 Fifth Street
San Francisco, CA 94107
(415) 434-3614

Los Angeles
11830 W. Pico Blvd.
W. Los Angeles, CA 90064
(213) 477-5021

San Diego
3860 Rosecrans Street
San Diego, CA 92110
(619) 298-0531

★ New Store:

Kent
24860 Pacific Hwy So.
Kent, WA 98032
(206) 246-3337

★ New Store:

Long Beach
4148 Viking Way
Long Beach, CA 90808
(213) 421-8939
(714) 827-5110

EAST COAST

Beverly
131 Rantoul Street
Beverly, MA 01915
(617) 922-6951

Kendall
9820 Dixie Highway
Kendall, FL 33156
(305) 667-4622

Miami
2945 N.E. Second Ave.
Miami, FL 33137
(305) 573-4600

photo/Sven Stau

The bottom makeup varies. It could be gravel, sand, silt, clay, rock piles or a combination of these. A tip on searching the area: Either swim about looking for goodies or settle down at one spot. If you stay in one spot, fan the gravel and silt downcurrent to expose objects. Many coins have been found by moving rocks.

Just behind the Coinpile breakwall is Bird Island Pier. Off the end of the pier is an area called the Fish Market. This is an excellent spot to look for old bottles. Stoneware and pontiled bottles turn up regularly. The best time to search is just after a good storm because the sandy bottom shifts. You can also search for bottles with a thin metal rod. Probe the sand. When an audible clink is heard, dig out your find. The visibility at the Fish Market is a terrific one to two feet.

Buffalo played a major part in the War of 1812. The Americans were encamped in and around Buffalo, the British at Fort Erie directly across the lake. All sorts of raids and battles waged back and forth. A tremendous amount of shelling and action took place. Diving anywhere between these two points often turns up such things as cannonballs, musketballs, guns or gun parts, buttons, coins and remains of schooners.

NAUI COLLEGE

YOUR ASSURANCE OF PERSONAL PROFESSIONAL TRAINING

Whether you desire a full time career as a professional sport diving instructor or want to develop your advanced level skills... consider NAUI College.

- A maximum student / teacher ratio of 6:1
- A supportive staff of professional educators led by Jim Hicks, one of the industry's top minds
- Free full-time placement assistance and business consultation for graduates
- An esteemed roster of alumni worldwide

If you are looking for an intelligent and straightforward approach, call collect or send for information.

Please send me your catalog.

Name _____

Address _____

City _____ State _____ Zip _____

NATIONAL ASSOCIATION OF UNDERWATER

INSTRUCTORS COLLEGE

2400 West Coast Hwy, Suite M
Newport Beach, CA 92663
714/ 631-4282

All courses approved by the Superintendent of Education. Approved for V.A. benefits. Financing available.

circle # 185 on Reader Service Card

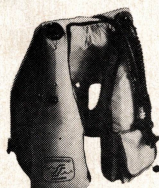
Pennekamp Park's Silver Anniversary lights the way for noble experiments



see October's
skindiver



80 cu. ft.
Aluminum Tank
with K
\$109.95*



Stabilizing Jacket
with Inflator #SJE 83
\$99.95



Combo Gauge
5000 PSI/150 Ft.
\$59.95*

*ALL PRICES PLUS SHIPPING
AVAILABLE AT ALL LAGUNA SEA SPORT LOCATIONS
PRICES EFFECTIVE THROUGH SEPTEMBER 20, 1984

LAGUNA SEA SPORTS
ORDER DESK 714 645-5820
NO COLLECT CALLS OVERSEAS BUYERS TELEX 298847 NAUT-UR



Laguna Beach
(714) 494-6965
925 No. Coast Hwy.
Laguna Beach, Ca. 92651

Costa Mesa
(714) 645-5820
2146 Newport Blvd.
Costa Mesa, Ca. 92627

Van Nuys
(213) 787-7066
6959 Van Nuys Blvd.
Van Nuys, Ca. 91405

Riverside
(714) 683-6244
6343 Magnolia Ave.
Riverside, Ca. 92506

Torrance
(213) 373-9364
22767 Hawthorne Blvd.
Torrance, Ca. 90504

Underwater Life Support Systems are potentially dangerous to a non-trained user. These include scuba tanks, regulators and buoyancy compensators. This ad does not constitute an offer to sell these items via mail order.

circle # 186 on Reader Service Card

DIVING WESTERN NY

Since this area is a source of water for the Niagara River, there is a current. This makes for a lazy drift dive. As you drift along the bottom, look for goodies.

Buffalo, during its heyday, was one of the largest ports of call in the world and filled with many different types of sailing vessels: cargo ships, schooners, passenger ships, steamships and ferries to name a few. Buffalo Harbor was so congested fights would break out between crewmen of different ships to see who would be unloading their wares next. Ships were burned, sabotaged and so forth. The entrance of the famous Erie Canal had to be entered in Buffalo. The waterfront was a busy place. Along the shore more than 500 taverns, saloons, brothels and the like sprung up.

It is estimated that 1200 ships have gone down in this area. Only a handful have been found. Many have been broken up with no traces left. But, just as many lie hidden, awaiting diver discovery. There are several wrecks lying in Buffalo Harbor or just outside the harbor. If you are planning on diving these contact a local dive shop. They can give you exact locations and landmarks. If you happen to have a chart recorder these wrecks will be easier to find.

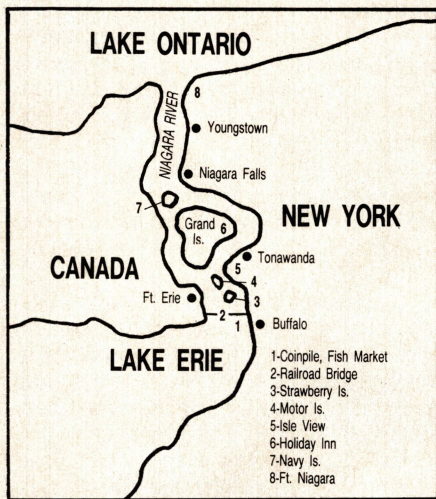
After diving Lake Erie, why not do some drift diving in the Niagara River? Where Lake Erie flows into the Niagara, the current is very fast. Extra weight is desired if you wish to stop and cling to the bottom. It is not uncommon to try to stop by grabbing a huge rock. Be warned, the current will easily lift the rock and you, pushing both down river. If you face into the current, your mask will wiggle back and forth. so will your regulator. Bite down hard if you wish to keep it in your mouth. Dive from the start of the Niagara River down to the International Railroad Bridge with caution. It would be best to seek an experienced diver as a buddy. Buddy lines are encouraged.

Lots of smuggling went on in this area of the river, including aliens and bootleg whiskey. Intact bottles and cases lie about on the river bottom. Police of long ago dumped confiscated weapons and slot machines into the water here. Several members of the Buffalo Aqua Club, years back, found a case of 150 year old flintlock pistols intact. They were preserved in their original grease wrappings. Another diver discovered a cannon along this stretch of river. Several other divers came upon a cask. Upon opening it, they found pitch. Pitch was used to coat the hulls of early sailing vessels. While divers were scooping out the tar-like material, they found hundreds of French coins. These dated from the 1700s.

While you are drifting along, make sure

to check in crevices and behind rocks for old bottles, anchors, fishing gear or whatever catches your eye. Visibility in the area will usually be 10-15 feet or more.

Down river from the International Railroad Bridge are several islands including Strawberry and Motor. Both had saloons on them during the early 1900s. During prohibition these two islands were used



as stopover points. The river current is moderate and easily handled. Drift dives around either island should produce old bottles. Several huge anchors have also been salvaged here.

Grand Island is next. It is the largest island in the Niagara River and drift diving on either side will produce old bottles as well as many other treasures. Along each side, in the 1890s, were several amusement parks and beaches. Much history surrounds this island. As the swirling, boiling water takes you around the West River, you will drift by many huge boulders. At the northern tip of the island you will find old submerged logs. These are the only clue to the logging community that flourished in the 1800s to 1900. In between these logs thousands of old bottles and other artifacts have been discovered. Still, many remain.

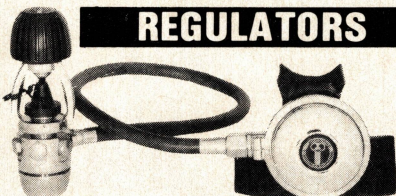
Back on the East River, leisurely drift dives can be made. On the Grand Island side of the river, a popular starting point is where the power lines cross the river into Tonawanda. You may wish to start at the small electric house just north of the power lines. Your exit point for the drift dive will be the Holiday Inn, about a mile down. If you make the dive from shore, use two vehicles. Meet at the Holiday Inn parking lot and load all gear into one car, using it to get to the power lines. The other car stays in the parking lot.

One word of advice: Surface every 45 minutes to check your progress. If you happen to drift past the Holiday Inn, the current makes a change in direction. It sweeps directly across the river toward Tonawanda. It's a long hike back across. Visibility will be around 8-15 feet. Be on the lookout for old bottles, boat motors, boats and anchors.

PRICE BUSTERS

SPORTS MERCHANDISERS is a **Price Buster!** Our warehouse stocks thousands of items for immediate shipment anywhere in the U. S. We sell only brand name merchandise in original boxes with guarantees from U. S. manufacturers.

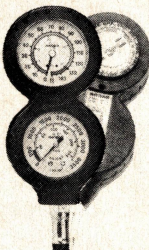
REGULATORS



DACOR PACER 300	119 ⁹⁵
U.S. DIVERS CONSHSELF	129 ⁹⁵
DACOR PACER 900	139 ⁹⁵
OCTOPUS	59 ⁹⁵

Add \$3.50 shipping for each Regulator ordered.

INSTRUMENTS



DACOR NAVIGATOR	
CPG, Oil Filled Depth Gauge & Compass	89 ⁹⁵
with Max Depth Recorder	99 ⁹⁵

DACOR DELUXE COMBO	
Combo CPG, Oil Filled Depth Gauge	79 ⁹⁵
with Max Depth Recorder	89 ⁹⁵

U.S. DIVERS DIVEMASTER I	
CPG, Oil Filled Depth Gauge	79 ⁹⁵
U.S. DIVERS DIVEMASTER III	
CPG, Oil Filled Depth Gauge & Compass ..	109 ⁹⁵
U.S. DIVERS PRO DIVE I	44 ⁹⁵
PARKWAY PRESSURE GAUGE	39 ⁹⁵

Add \$2.50 shipping for each Instrument ordered.

UNDERWATER LIGHTS

OCEANIC 101	
Rechargeable with charger	69 ⁹⁵
UK 600 R	
Rechargeable with charger	69 ⁹⁵

Add \$3.00 shipping for each Light ordered.



OCEANIC
DEPTH / PRESSURE COMBO
5000 psi CPG & 150' Depth Gauge



69⁹⁵
Plus Shipping

B C JACKETS

ALL JACKETS COMPLETE WITH POWER INFLATOR AND KAM PACK

U.S. DIVERS
SEA OTTER
149⁹⁵



DELUXE JACKET	129 ⁹⁵
PARKWAY OCEAN JACKET	169 ⁹⁵
DACOR SEACHUTE	149 ⁹⁵
DACOR BCT JACKET	189 ⁹⁵



U.S. DIVERS
APOLLO BC
Complete with Power Inflator
99⁹⁵

STERNS
SKINDIVERS VEST
24⁹⁵

Add \$4.00 shipping for each Jacket ordered.

WET SUITS

PARKWAY	
Farmer John and Jacket	169 ⁹⁵
U.S. DIVERS	
Farmer John and Jacket	169 ⁹⁵

Add \$4.00 shipping for each Wet Suit ordered.

POWER FINS

U.S. DIVERS ROCKET FIN	
Open heel vented fin	24 ⁹⁵
THERMO PLASTIC POWER FIN	
Open heel vented fin	39 ⁹⁵

Add \$3.50 shipping for each pair of Fins ordered.

1-800-241-1856

IN GEORGIA CALL (404) 952-1629

RETAIL STORE LOCATED CONVENIENT TO I-75, I-85 and I-20
Hours: 10 A.M. to 7 P.M. Eastern Time MON. thru SAT.

Prices apply only to orders placed by mail or telephone and may vary from those in our store.

SPORTS MERCHANDISERS

1696 COBB PARKWAY, SE
P.O. BOX 1262
MARIETTA, GA 30061



ALL MERCHANDISE SHIPPED WITHIN 48 HOURS!

Use and operation of life support equipment should not be undertaken without qualified and proper instructions in their use. This ad does not imply the sale of life support equipment through the mail.

circle #187 on Reader Service Card

B&H MASTER CHARGE & VISA ACCEPTED
To Order - Call Toll Free
800-221-5662

NEED-IT-IN-A-HURRY!
CALL FOR SPECIAL SERVICE
OVERNIGHT EXPRESS
FULL PRICE
800-221-5662

OPEN SUNDAY
10:00 A.M. - 4:00 P.M. EST.
DAILY 9-6 - Fri. 9-2 - CLOSED SAT.

NEW NIKONOS V.....call
NIKONOS IV-A w/35 f2.5.....CALL
 NIKONOS CASE.....**24.95**
 NEW! 15/2.8 w/Finder.....**814.00**
 28/3.5.....**156.90** 80/4.....**156.90**
 Close-up Kit.....**149.00**
 NIKONOS SB-101 Kit.....**CALL**
 HANIMAX 35mm Amphibian.....**154.90**
 SEKONIC L164B MARINE.....**77.90**

• INFORMATION
• N.Y. STATE ORDERS CALL
(212) 807-7474

All-Weather/Underwater Electronic Flash Unit
MARINE 32

239.00

ikelite Oceanic
ewa-marine
PELICAN CASES
CALL FOR LOW PRICES

Call Now & Say... "Charge It!"
ORDER NOW



B & H Photo Corp.
 119 West 17th Street
 New York N.Y. 10011
(212) 807-7474
 (Bet. 6th & 7th Ave.)

MAIL & PHONE ORDERS ACCEPTED. NY residents add sales tax. Personal checks must clear. Fast delivery with certified check or money order. M.C. & Visa users give Card No. Bank No. & expiration date. Min. handling, ins. and shipping up to 3 lbs. \$5.50; over 3lbs. to 50lbs. Send \$5g for each additional pound. Not responsible for type errors. Outside of Cont. U.S.A. add approx. shipping. Ship rates are for U.P.S. Prices are current as of date of insertion, and subject to change without notice.
 All Items are Sold With U.S.A. or Int'l Warranty

circle #188 on Reader Service Card



The Sea Hunter XL200

Unlock the Treasure Vaults of the Sea!

Garrett's NEW XL200 Supreme Beach Machine unlocks treasure vaults of the sea. With the world's first discriminating, most powerful PULSE metal detector, you can find coins, rings, and jewelry on the beach or discover shipwreck treasure to 200-foot depths! GARRETT is to Treasure Hunting as SCUBA is to Diving... THE PROFESSIONAL'S CHOICE! Contact us or visit your Garrett supplier today!



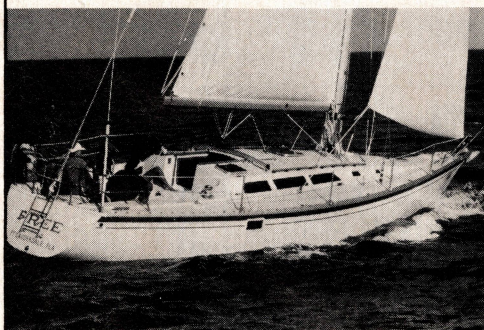
GARRETT
METAL DETECTORS
Dept. SD832
 2814 National Drive
 Garland, TX 75041 U.S.A.
 214/278-6151

For a FREE Buyer's Guide call:
1-800-527-4011
1-800-442-4889
 (in Texas)
Dealer Inquiries Invited

circle #189 on Reader Service Card

BAREBOAT CHARTERS

Ft. Lauderdale to Keys & Bahamas, Chesapeake, Corpus Christi
New O'Day 39 Performance Cruiser



Sailboats South Charters' O'Day 39 is a good example of what we mean by 'the better-boat bareboat'. Roomy aft double cabins, LORAN equipped, excellent sailing performance are what makes this a better boat. The charter price of \$1165 is a complete bareboat package, including the boat, U.S.C.G. required safety equipment, dinghy with outboard, tableware, linens and tools.

Two private aft double cabins makes this a four cabin yacht with two heads and showers!

Bareboat Sailboats For Charter:

Cal 31	\$675	O'Day 37	\$ 900
Allmand 31	\$765	O'Day 39	\$1165
O'Day 34	\$810	Captains Available	

1 WEEK SUMMER RATE

1 (800) 327-5033
In Florida: (305) 764-2810

DIVISION OF ENTERPRISE YACHT SERVICES, INC.

SAILBOATS SOUTH CHARTERS
 1900 S.E. 15 St., Ft. Laud., FL 33316

circle #190 on Reader Service Card

DIVING WESTERN NY

Directly across the East River is the city of Tonawanda. Right on the water is a place called Isle View Park. For generations, racing boats and hydroplanes have competed here. Diving is very popular when the boats are not racing. Items found here will be the same as across the river. Additionally, you can dive for money—reward money. Plenty of racing machines have broken up and sank. The owners often post reward money for those who can return parts of their boats. Near shore the visibility can be from two to six feet. Farther offshore it gets better—8 to 12 feet.

The last area in the upper Niagara River to dive is the last large island several miles above the mighty Niagara Falls. This is known as Navy Island and shares much history with the surrounding areas. Indians, French, English, Americans and Fenians occupied this island. It was used in the Revolutionary War, the War of 1812 and the Fenian Raids of 1836. During the war of 1812, this island had a ship building port on its east side. In the 1890s a hotel existed, along with a horse racing track, until the FBI burned it down. The last inhabitant was a farmer. He remained until the 1940s. Now Navy Island is covered with a forest—watch for the poison ivy. Divers have come up with cannon balls, an old blunderbuss rifle and old bottles here.

Near Navy Island, it is rumored the police used to dump weapons and slot machines. Make sure you have a spare motor and several anchors on your boat just to be safe. Remember, Niagara Falls is just several miles downriver.

Several miles below Niagara Falls is a town called Lewiston. It has been the gateway to the West since the 1600s. The lower Niagara River is deep diver paradise. It gets dark and cold and the current is stronger below 70 feet. Still, many divers enjoy diving at Lewiston Park. Descending there are ledges that drop off steeply like a giant staircase. This spot is excellent for searching for old bottles. If you are lucky you may find some treasures the French hid from the Indians.

A final dive spot is the mouth of the Niagara River, where it empties into Lake Ontario. On the U.S. side is Fort Niagara, originally built as a trading post in the 1600s. The French, British and Americans have each had control of it since it was built. War was waged with the enemy who resided at the two forts opposite it on the Canadian shore. The only access you have to the water around the fort is by boat. Cannonballs and other military relics are found in the sand. The Coast Guard may chase you away because it doesn't want you to find too many relics.



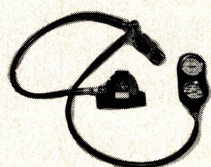
WAREHOUSE CLEARANCE

CHICAGO AND ATLANTA LOCATION
CALL TOLL FREE 1-800-621-6019
FOR FREE COMPUTER PRINT OUT OF
ALL CLEARANCE ITEMS PRICED AT
SUPER SAVINGS

WHILE SUPPLIES LAST

Chicago Store only 10 Min. from O'Hare Airport - Atlanta Store only 5 Min. from Hartsfield Airport!

Heuer Stainless Quartz Watch,
Model #980.013 208.00
Quartz Dive Watch 84.95
Watch Band 9.00
Thermometer 34.95
Ikelite Side-View
Compass 19.95
Ikelite 2500 Pro
Compass 19.95
12 lb's of Weight
with Belt 19.95
Chronosport Auto-20
Dive Watch 128.00
Jacket B.C.D. 95.00
Horse Collar B.C.D.
With Power 104.95

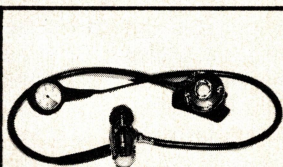


**2S - Dacor Pacer
900 Regulator,
Sherwood Con-
sole \$209.95**



**3S - Seatec Manta
B.C.D. With Power,
Oceanic Omega or
Tekna T-2100BX
Regulator, PSI/Depth
Console \$449.95**

Professional 44" Two Sling
Spear Gun 89.95
Wenoka Gear Bag #1802, 13" x
15 1/2" x 13" 55.95
Heavy Duty 15 x 30 Equipment
Bag 19.95
16 x 26" Mesh Goodie Bag .. 7.95
Silicone Tri-View Mask 44.95
U.S. Divers Rocket Fins ... 28.00
Snorkel 6.95
Depth Gauge 29.95
Pressure Gauge 39.95
Psi/Depth Console 69.95
Dacor Depth Gauge 34.95
BT-400 Bottom Timer 54.95
Open Heel Vented Fins 22.75



**1S - Sherwood
Brut Regulator
With Pressure
Gauge .. \$137.50**

Sherwood Magnum
Regulator 117.50
Carter 100 lb. Lift Bag 41.95
Parkway Regulator 109.95
Octopus With 42" Hose ... 42.95
Single Hose Regulator 89.95
U.S. Divers Sea Master Dive
Knife 24.95
Dacor UL-750 Light 31.50
Dive Light 22.95
80K Aluminum Tank 114.95
80J Aluminum Tank 129.95
50K Aluminum Tank 104.95
Steel 96 Cuft K Tank 199.95

Wet Suit Boots,
Hard Sole 26.95
Dacor Escape 1
Dive Knife 19.95
Denier Nylon Dry Suit with
Valves 369.95
Wet Suit Hanger 8.95
5 x 7" Slate 5.95
Power Inflator 24.95
Soft Band Back Pack 31.95
Aluminum Twin 50's with Pack
and Manifold 289.95
Medium Or Large Diving T-Shirt
Only \$4.95 With Any Order!



**4S - Open Heel
Vented Fins,
Dacor Tri-View
Mask, Snorkel
..... \$59.95**

HOW TO ORDER FROM BERRY SCUBA

By Phone: Call 1-800-621-6019. Have your Visa or Master Card handy, and a list of the items that you wish to order. This is an ordering line only, and operators cannot answer any questions on past orders, stock, or prices. For information call 312-763-1626. This is our hot line direct to the mail order desk! **By Mail:** Send us a money order, cashiers check, or your charge card number and expiration date, along with a letter explaining what you wish to order. Orders paid for with Master Card, Visa, Money Orders, and Cashiers Checks are usually shipped within 48 hours. Personal checks and C.O.D. orders take up to 30 days. Scuba equipment is potentially dangerous to the non-trained and un-certified user. These items include, but are not limited to, tanks, regulators, and B.C.D.'s. This ad does not constitute and offer to sell items in this ad via mail order. Illinois residents include 8% sales tax.

256 Page Super Catalog:
Thousands Of Scuba
Products Pictured And
Described. All At Berry
Low Prices! \$4.50

circle #191 on Reader Service Card

Scuba Videolog: The
Scuba Catalog In Mo-
tion! Our Most Popular
Items Shown And Priced
On Video! VHS Or BETA
(Please Specify) . \$14.95

BERRY SCUBA COMPANY
6674 N. Northwest Highway
Chicago, IL 60631
(312) 763-1626

BERRY ATLANTA
3443 Stewart
Hapeville, GA 30354
(404) 766-1186

BERRY SCUBA
1717 Rand Road
Palatine, IL 60067
(312) 358-3848

BERRY SCUBA COMPANY
Yorktown Mall
Lombard, IL 60148
(312) 495-2822

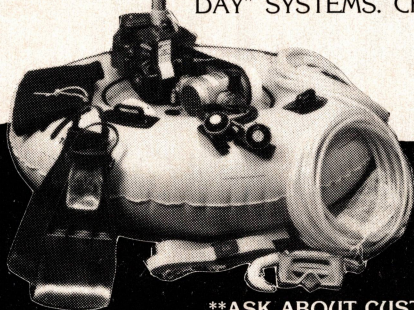
For Your Free Copy Of Our Latest 64 Page Sale Catalog



BROWNIE'S THIRD LUNG

FOR 14 YEARS THE ORIGINAL AND ONLY "DIVE ALL DAY" SYSTEMS. CHOOSE FROM OVER 10 LIGHT AND COMPACT MODELS.

MAJOR CREDIT CARDS ACCEPTED



WRITE: P.O. BOX 290357
FT. LAUD., FL 33329

CALL: 800/327-0412
FLA.: 305/584-5570

****ASK ABOUT CUSTOM, TANK TO REGULATOR HOSES****

Aquatic Jewelry

in 14 Kt. and 18 Kt. Gold



TANK w/REGULATOR
14 Kt. \$130.00

DOUBLE FINS
14 Kt. \$70.00



PLUS POSTAGE

Photos Actual Size

Many other items available.
FOR FREE BROCHURE,
WRITE TO:



Mainly Gold
FINE AQUATIC SCULPTURES
BY HOLLY AND JOHN DEES

222 1/2 Seabreeze Blvd., Daytona Beach, FL 32018
Ph. 904/258-1960

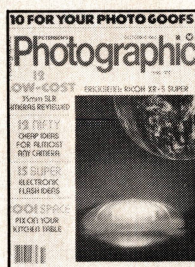
Also look for us in the
Finest Dive Stores



DEALER INQUIRIES INVITED



PETERSEN'S Photographic BRINGS THE WORLD OF PHOTOGRAPHY INTO FOCUS.



Wouldn't you like to have a cleaner, crisper, clearer understanding of your favorite hobby or profession? Our colorful,

practical "how-to" format presents only the most current, up-to-date information with one single goal in mind: to help you take a great photograph we can both be proud of. Pick up Petersen's PHOTOGRAPHIC and bring your world of photography into focus.

Now On Sale At Your Local
Newsstand



Rx

FOR DIVERS

BY FRED BOVE, M.D., PH.D.

This month I have the pleasure of presenting an article on women and diving written by Dr. Judith Andersen, a hematologist at the University of Michigan. She is a NOAA trained diving physician who took part in the Landmark Atlantis Dives at Duke University as a member of the research team. She is an experienced diver and a well-respected diving physician...Fred Bove, MD, PhD.

To write a column on "The Woman Diver" runs counter to both my feminist instincts (why should women divers be singled out for discussion from the general diving population) and my scientific training (precious few of the many investigations of human diving physiology have used female subjects, hence who knows how applicable they are). Because there are a few fundamental physiological differences between normal men and women, and because, however underrepresented in military and commercial diving populations, women constitute an increasing proportion of sports and scientific scuba users, it seems reasonable to summarize the physiological and psychological concerns unique to the female diver.

First, the general fitness of women for scuba diving: Although the average fit female body contains more fatty tissue (and hence less muscle) per unit of weight than its male counterpart and will appear to have less cardiovascular reserve than the male when tested by customary methods, it is clear that the maximum exercise capacity of a fit woman far exceeds the level necessary for safe scuba diving. Furthermore, a premenopausal woman is far less likely than her male counterpart to have silent coronary artery disease and hence less likely to experience angina or a myocardial infarction if exposed to stressful underwater or surface conditions. Statistically, a woman is less apt to be a smoker or to have high

NOTICE TO SUBSCRIBERS:

From time to time, we permit reputable companies to send announcements of their products or services to our subscribers in the mail. Requests for this privilege are examined with great care, to be sure they will be of interest to our readers.

If you prefer not to receive such mailings, and want your name in our files only for mailing the magazine to your home, please write us, enclosing a current address mailing label. Please address your request to:

PETERSEN PUBLISHING COMPANY

Attn: Nora King, 6725 Sunset Blvd., Los Angeles, Ca. 90028.

circle #193 on Reader Service Card

blood pressure, hence less likely to have the additional limitations on breathing or cardiovascular performance imposed by these conditions. Although she may be more prone to comment upon or respond to water temperature change than her male diving buddy (my opinion), she will experience actual change in both body surface and core temperature more slowly than he; hence, like the Japanese diving Ama, physiologically she may outlast her male companion in cold water.

Many studies and well-publicized athletic events have demonstrated conclusively the stamina of female athletes. Moreover, women divers are reputed to be less prone to make macho diving decisions, hence may be less likely to overstay bottom times or to undertake risky diving situations. Thus, it seems obvious that a woman who exercises regularly, has the requisite pre-scuba water skills, and is properly trained and certified for scuba use, should prove to be an excellent diver.

Predictable events in the female reproductive cycle do suggest a few specific concerns for the woman diver. First, monthly menstrual blood loss, particularly in women with heavy flow, may lead to the development of iron deficiency and anemia, causing a subjective sensation of early fatigue and an eventual true decrease in exercise capacity.

Second, pre-menstrual symptoms of weight gain, breast tenderness, backache, lower abdominal discomfort, irritability, insomnia, depression—the controversial pre-menstrual syndrome, may make diving a less-than pleasant experience. There are no studies that illustrate impaired judgment or performance in women suffering from this pre-menstrual syndrome, but many women feel their concentration to be lessened and find the small discomforts often associated with diving to be accentuated during this period. Neither iron deficiency nor the pre-menstrual syndrome, now known to be due to temporary overproduction of lipid compounds called prostaglandins, need deter a woman diver. Iron deficiency can be diagnosed with a simple blood test and treated with oral iron supplements. The pre-menstrual syndrome can be prevented by drugs which inhibit, temporarily, the ability of tissues to manufacture prostaglandins. Any competent gynecologist can diagnose and treat both.

Third, pregnant women should not dive. The risk to the fetus from marginal decompression remains controversial, as does the potential for increased risk of decompression sickness in the pregnant woman. The likelihood of fetal damage arising from treatment of decompression sickness in the mother is real; a nine month diving hiatus seems a small price to pay for a healthy child with normal limbs and normal vision.

One additional problem that afflicts only a portion of women sport divers, but is

SuperLite-17



The leading edge in life support equipment for the working diver



SEND FOR FREE CATALOG

DIVING SYSTEMS INTERNATIONAL

425 Garden Street, Dept. SD, Santa Barbara, CA 93101

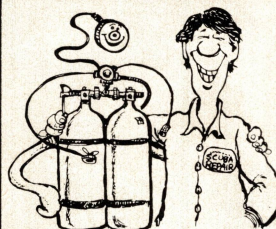
© Kirby-Morgan 1983

circle # 194 on Reader Service Card

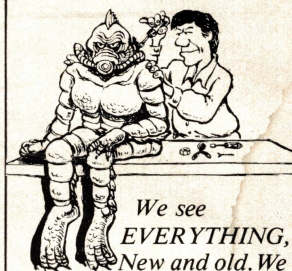
PROFESSIONAL S.C.U.B.A. REPAIR



*Your equipments'
best friend, and still
#1 after 23 years!*



*We're the underwater
equipment repair
experts, dedicated to
safety, honesty, and
unexcelled workmanship.
All workmanship is
guaranteed for 1 year!**



*We see
EVERYTHING,
New and old. We
can repair equipment that
others cannot, with the
largest parts inventory in
the U.S. (for repairs only).*

*Under normal use and recommended care.

Top quality work on almost anything mechanical:

- Flotation Vests
- Single and double hose regulators
- Tanks tested and serviced
- Valves overhauled
- Twin tank manifolds rewelded
- Spear guns

We use ultrasonics for superb cleaning.



Professional S.C.U.B.A. Repair
5725 Cahuenga Boulevard
North Hollywood, CA 91601 U.S.A.
(818) 769-1484

JUST GIVE US 10 WEEKS OF YOUR LIFE AND WE'LL GIVE YOU A CAREER.

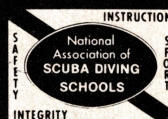
We will change it beyond your imagination. For over 22 years NASDS has been helping people build and expand their businesses. Thirteen years ago we started our vocational college to teach our method of instruction to people who wanted to make a career in diving.

Our network of over 200 retail store/schools needs trained instructors and can offer you a challenging position in the diving business. Why not go with the best? We have a time-proven record of excellence.

Call our Placement Director at the NASDS Instructors College at (619)224-3228.

NASDS Instructors College
4004 Sports Arena Blvd.
San Diego, CA 92110

State approved by V.A., Students Vocational Rehabilitation, State and V.A.



Rx FOR DIVERS

probably unique to women divers and potentially quite dangerous, is the reverse macho syndrome. It is experienced chiefly by women who have learned to dive at the urging of an enthusiastic diver spouse or male friend and whose diving experience has been gained chiefly as a buddy to this individual. Because their diving skills and experience are less well-developed, these women may continue to feel subordinate to their diving buddies. Consequently they will rarely plan dives, calculate surface intervals or repetitive dive times and often depend upon their buddies for underwater orientation, bottom time determination, equipment maintenance and other routine functions of the sport diver. By continuing in a passive role, they fail to develop the skills, confidence, pleasure and sense of freedom derived from and associated with sport diving. More importantly, perhaps, they expose themselves and their buddies to the risk of an unpracticed and perhaps panicky response to an emergency situation. If the buddy becomes injured, experiences equipment failure or simply exercises poor judgment the subordinate diver may feel herself stressed beyond her limits; injury to both members of the pair may result. Certainly non-macho women have astounded themselves by responding heroically to such situations; realistically they should not have had to. Diving is not a sport in which one member of a buddy pair is always preeminent; both members should have responsibility for equipment and fitness maintenance, dive planning, landmark determination and handling of emergency situations. If members of an habitual buddy pair agree that buddy breathing is difficult under stressful situations, both should have octopus second stages and have practiced their use under non-stressful conditions.

Here is one final caveat for women (and men) sport divers, pointed out to me by Dr. Lee Somers. Mismatch of physiques is more common with male-female buddy pairs. However fit and willing she may be, a 96 pound woman diver will have difficulty rescuing a 250 pound male buddy and may find it impossible to maneuver him, disabled, into a small boat without assistance. It makes good sense for such mismatched pairs to dive only with other pairs of divers in an extended buddy relationship, so that a disabled diver has at least three other divers to assist in resuscitating and rescuing him, or her, manipulating a boat and embarking upon emergency transport measures.

In short, women remain women—capable of becoming superb divers, protected hormonally from some of the conditions

MOVING?

DON'T MISS A SINGLE ISSUE OF SKIN DIVER

Let us know your new address right away. Attach an old mailing label in the space provided and print your new address where indicated.

QUESTION ABOUT YOUR SUBSCRIPTION?

When you write, be sure to include a label. It helps us serve you more promptly.

TO SUBSCRIBE OR EXTEND YOUR SUBSCRIPTION:

Check the appropriate boxes below:

- ☐ New subscription. Please allow 4-8 weeks for your first copy to be mailed. ☐ Renewal subscription. Please include a current address label to insure prompt and proper extension.
☐ 1-year \$11.94. This rate limited to the U.S.A. and its Possessions. ☐ Payment enclosed or ☐ Bill me.

MAIL TO: SKIN DIVER
6725 Sunset Blvd., P.O. Box 3295, Los Angeles, CA 90028

Name _____

Address _____

City _____

State _____

Zip _____

ATTACH
LABEL
HERE

(If label is not handy, print OLD address in this space.)



NEED A BUDDY?

go trick or treatin' in
October with
skindiver

that plague male divers and subject to a few unique physiological and practical problems. I think there are few male divers who would disagree with the notion that diving has become a more interesting and enjoyable (and safer) sport since women have taken it up. 

RESCUE TECHNIQUE

(Continued from Page 98)

be strapped to the patient's face and freeflowing oxygen can be admitted into the mask through the inlet, which has a standard sized coupling. If the victim is breathing, the oxygen will supplement the person's respiration. If the person is not breathing spontaneously, the oxygen can still flow into the mask and the rescuer can ventilate the victim through the large tube at the top of the mask. According to the instructions, this technique results in a 50 percent oxygen concentration with a 10 liter per minute oxygen flow. This compares with an 18 percent oxygen concentration for inspiration from exhaled air ventilation.

Note: Freeflow oxygen equipment may be used without restriction, but resuscitators are to be used only by trained and qualified personnel. The mouthpiece opening on the pocket mask is *not* to be sealed when freeflow oxygen equipment is used, because the amount of gas admitted into the mask is insufficient to meet the needs of the patient. Oxygen needs to flow through the smaller port and air through the larger one.

So, if you are looking for a better, easier way to handle in-water emergencies, get a pocket mask. It is light, compact, inexpensive, easy to use, easy to clean, durable and better than any other method of ventilation with which I am familiar. Use of the pocket mask is truly diving's latest, greatest rescue technique. 

FALL RIVER MUSEUM

Robert Cembrola of Warren, Rhode Island, has been named the executive director of the Marine Museum at Fall River, MA. Cembrola, who assumed his new post in June, has a strong background in marine history and naval archaeology.

The museum houses the largest collection of memorabilia on the Old Fall River Line. Other displays and exhibits tell the story and role of marine transportation in the history of the United States.

Founded in 1968, the Marine Museum at Fall River is in the midst of a two year restoration and renovation project that will expand previously unused second floor space and add a new facade to the building, a replica of an Old Fall River Line wharf.

The Museum is open seven days a week from 10:00 am to 5:00 pm and is at 70 Water Street in the Battleship Cove area of Fall River, just off Route 195. 

Sea Ray WET SUITS

by Royal Mail Order
289D Suburban Avenue
Deer Park, NY 11729

ORDER DIRECT

from manufacturer and **SAVE \$**

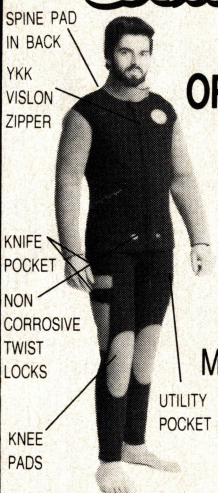
CALL TOLL FREE

800-645-5554 in USA

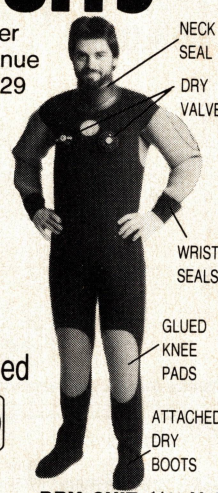
New York Residents Call (516) 667-7249

Same Day Shipment

Money Back Guarantee if not Satisfied



SPINE PAD IN BACK
YKK VISLON ZIPPER
KNIFE POCKET
NON CORROSIVE TWIST LOCKS
KNEE PADS
UTILITY POCKET



NECK SEAL
DRY VALVES
WRIST SEALS
GLUED KNEE PADS
ATTACHED DRY BOOTS

FARMER JOHN DELUXE 1/4" NYLON-2
Black w/ Blue Arms & Accessories
\$149.95

FARMER JOHN REGULAR - 1/4" Nylon-2, Black with Blue Arms & Collar **124.95**
HIGHWAISTED - 1/4" Nylon-2, Jacket & Pants Black w/ Blue Arms & Collar 115.00
SHORTY 1/4" Nylon-2, Blue with Black Trim, short sleeves 59.00
VEST AND HOOD - 1/4" Nylon-1, Black 29.95
VEST WITHOUT HOOD - 1/4" Nylon-1, Black 24.95

DRY SUIT 1/4" N-2
Black w/ Blue Arms
With Dry Valves **\$350.** (as shown)
With Oral Inflator **299.00**

1/4" N-2 Cold Water Hood
19.95

1/4" N-2 Hard Sole Boots
19.95

1/4" N-2 3 Finger Mitts
19.00

1/4" N-2 5 Finger Gloves
19.95

SHIPPING by UPS
Suits - 5.00 ea.
Accessories 2.50 ea.
Accessories ordered with suit 1.00 ea.

• All Suits & Accessories Triple Glued • Sewn • Bartacked • Dealer Inquiries Invited •

Robert L. Straight

• H O U S T O N •



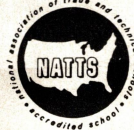
The Sea Symbols collections — exquisite jewelry in gold and silver by renowned artist Robert L. Straight

Catalog \$2.00
8439 Barkley Dr., Houston TX 77017
(713) 643-4051

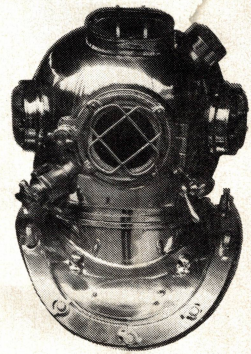
WEAR A DIFFERENT HAT

BECOME A PRO DIVER

One complete course including air, mixed gas, saturation, U/W cutting and welding, and chamber operation.



An eligible institution for student loans & grants.
(Located in the Port of Philadelphia)



DIVERS ACADEMY

OF THE EASTERN SEABOARD
2500 So. Broadway • Camden, N.J. 08104
Call Collect (609) 966-1871

NAME _____

ADDRESS _____

CITY _____ ST _____ ZIP _____

PHONE _____

**20/20
VISION
\$69.00**



The method of bonding lenses to the mask is the only one which corrects vision exactly as your glasses do. Individually analyzed by an optometrist experienced in diving and problems of underwater vision. To order send mask, a copy of your prescription including PD (distance between pupils) and \$69.00. Bifocals \$30.00 extra. Airmail return \$4.00 extra. We can obtain complete information from your glasses. Prescription swimming goggles also available. Send for free brochure.

DRS. NEWTON AND O'BRIEN
575 W. 6th Street, San Pedro, CA 90731
(213) 832-1185/832-7300

Temple University School of Medicine
presents

**14th Annual Underwater Medicine
and Exercise Physiology Program**
Spanish Cove, Grand Cayman Island
Saturday, January 12, 1985
to Saturday January 19, 1985
26 hours Category 1 CME Credit
Course Director **A. A. Bove, M.D.**

**Medical Consultant
Skin Diver Magazine
Plus Outstanding Faculty
For further information:**

Temple University School of Medicine
Office for Continuing Medical Education
3400 North Broad Street
Philadelphia, PA 19140
215-221-4787

circle #197 on Reader Service Card

DIVE ALL DAY WITH SUPER SNORKEL



Enjoy real diving freedom
with an unlimited
air supply! It's
compact and
lightweight.
You can take it
to your favorite
dive spots.

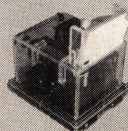
See your dealer or:

INNOVATIVE DESIGNS INC.
1870 Oak Creek Dr., Dunedin, FL 33528
(813) 784-5349

UNDERWATER VIDEO \$595 UP

Custom housing for any camera, VCR, lights, etc.
Designed strong and practical. Fast service.

ACRYLIC DESIGNS BY MARCUS
909 N.E. 3rd St., Ft. Lauderdale, FL 33301 • (305) 763-8999



circle #204 on Reader Service Card

DIVING KNIFE

- Chrome plated stainless steel blade.
- Has inch scale, serrated saw on blade, hammer on one end.
- Durable rubber handle, 2 rubber straps with plastic sheath.
- Overall size 11 1/2". Blade 6 3/4".

ONLY \$12.95 (a \$40 value)

Money Back Guarantee

DTY MARKETPLACE, Dept. SI
132 So. Indiana St., Los Angeles, CA 90063



THE Florida's Fabulous Gulf Wreck BY J.E. REILLY BAYRONTA

By 1:00 am on September 13, 1919 it was all over. Captain Everett and the 47 members of his crew had waged a valiant fight but the great West Indies hurricane had proved too much for the 400 foot British cargo ship *Bayronta*.

September 10 had found her with all holds and the engine room flooded, disabled and listing badly. With the odds stacked heavily against them the captain and crew continued the fight to save the stricken ship, but it foundered and sank in the Gulf of Mexico.

The *Bayronta* lies 32 miles offshore Boca Grande, Englewood and Venice, and 36 miles south of Sarasota on the gulf coast of Florida. She was first known as the Boca Grande Wreck because commercial headboats from that community had been fishing the site for years. Later, small groups of spearfishermen from St. Petersburg pursued their hobby there.

In the spring of 1973 veteran scuba diver Dick Miller began organizing periodic trips for 25 to 30 divers to the wreck, lying on its port side in 100 feet of water with the keel 75 feet below the surface.

The wreck remained unidentified until the spring of 1974, when I gathered all the data we had accumulated on several dives and forwarded it to Lloyd's of London with a request for an identification. T.M. Dinan, Lloyd's librarian, answered promptly, sending an extract copy of Lloyd's *Dictionary of Disasters at Sea During the Age of Steam*. It gave the following specifications: "Sale & Co. (Bay S.S. Co.) 1905; Armstrong, Whitworth & Co; 4,756 tons, 400 x 52 x 27; 498 n.h.p.; triple expansion engines. The British cargo ship *Bayronta* foundered on September 13, 1919 in 26 degrees 45 minutes N., 83 degrees W. while carrying wheat from Galveston to Marseilles."

The *Bayronta* is a mecca for divers on the gulf coast; she is the only genuine shipwreck from Cape Sable to Cedar Key and she attracts divers not only from Florida but also from out of state, where her fascinations are well known.

While there are other hulks littering the gulf floor, such as the old scuttled ferryboat near Fort Myers; the small steel barges 18 miles offshore Sarasota; or the landing ship, *Mexican Pride*, which lies in 130 feet of water 47 miles west of Sarasota, none can compare with the *Bayronta* for rewarding dives, outstanding pictures or possible souvenirs.

This large, hurricane-sunk ship, offers a huge fish population, unique spiny oysters, goodies for the opportunistic and courageous diver, beautiful shells for the

collector and a large, sand tiger shark which accepts divers on an equal footing and is considered the ship's mascot.

Diving the *Bayronta* can be a regularly scheduled activity throughout the year, with the possible exception of January, which occasionally spawns heavy seas and water below 70°F. The best diving occurs from early summer to late fall. The winter months, when gulf temperatures hover near or below 70°F, necessitate the use of a full wetsuit. However, a short sleeved wetsuit jacket is usually sufficient to ward off injuries from hull scrapes.

A general dive plan might be an initial dive with 20 minutes of bottom time, a rest period of two hours and a final dive with bottom time not exceeding 15 minutes. Avid spearfishermen with an appetite for barracuda generally utilize the rest period to snorkel around the dive boat for some of their favorite seafood or possibly the occasional amberjack, cobia, permit or snapper.

Visibility is a variable factor. It may be up to 75 feet or it could be as low as 25 feet. As a general rule morning dives usually have the greatest visibility, with clarity closing down in the afternoon. Several reasons have been advanced for a change in visibility. At times it is attributed to the presence of thermoclines, while during summer months blooms of algae or plankton may be the cause. While ascending under conditions of reduced visibility both the bottom and surface may be lost to view. It is then that a close watch on ascending bubbles and reliable depth gauge impart confidence.

Thermoclines represent a notable example of that often heard expression, "If you like diving you have to put up with minor discomforts." Here the thermocline is a chilling shock to an unsuspecting diver as suddenly he encounters water 10-15 degrees colder than what he just left. A thermocline may be around for all dives, it may be missing on the first dive but there for the second, or it may be missing all day. When present it may be ten feet thick, beginning 40 feet off the bottom, and on occasion it will extend all the way to the bottom.

The sand tiger shark, while a source of alarm for new divers, is akin to a house pet. Along with numerous smaller sharks he lives on the wreck, making at least an appearance every day and harming no one. My only meeting with the shark occurred one morning in March 1974 as my dive buddy and I were inching our way along the keel forward of the stern. Suddenly, Cathy Miller dug her fingers into

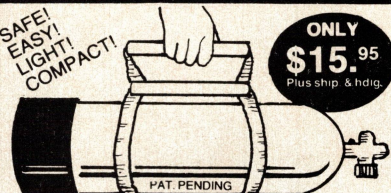
IMMEDIATE NATIONAL DISTRIBUTION FOR YOUR U/W PHOTO EQUIPMENT

Well-known marketer of u/w cameras, strobes, lenses and accessories seeks **new product ideas** from established domestic sources and foreign manufacturers. Currently marketing to divers, clubs, dealers, instructional organizations, travel groups. Exposure in trade shows, newsletters, mail order, major catalog, and showroom. On-the-shelf products considered for next catalog. Send inquiries with product description and your production capabilities to:

P.O. Box 624
Chappaqua, N.Y. 10514

circle #198 on Reader Service Card

**SAFE!
EASY!
LIGHT!
COMPACT!**



ONLY \$15.95
Plus ship. & hdg.

the Tank Carrier®

Now carrying your scuba tank horizontally is much easier, and the **Tank Carrier** fits in your back pocket and is built to last. Save your energy for diving!

*****MONEY BACK GUARANTEE*****

For immediate delivery send Money Order, Am. Ex., Visa or Master Card number to:

Simplex Inc., P.O. Box 9649
St. Thomas U.S.V.I., 00801
Phone: (809) 774-7115

add \$2.50 post. & hdg.

wreck detection with PROTON MAGNETOMETERS

designed for land & marine searches

*LIEBHARTZ THE SECOND DIFFERENTIAL MAGNETOMETER

WHY PAY \$75,000 FOR
OTHER 1/10 GAMMA
MAGNETIC STORM
CANCELLING MAGS

L3 \$725, L1.5 \$395

—shipboard or towed ok

Did you know all 1 sensor-

location mags must tow to

avoid engine E.M. noise &

count tiny voltage proton

precessions — they all suffer

huge errors from false pre-

cession counts & magnetic

storms — mags are used for

salvage, treasure, arch-

aeology, placer gold & blacksand

—DETECTS 1 LB STEEL AT 20 FT/64 LB AT 80 FT

2 TONS AT 320 FT, 125 TONS AT 1280 FT—

send for free info, \$2 for complete info,

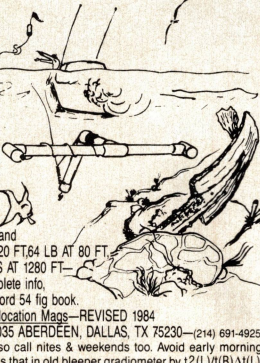
\$25 (\$29 foreign) for 61,000 word 54 fig book.

Searching with 1 & 2 Sensor-location Mags—REVISED 1984

M.L. DALTON RESEARCH, 6035 ABERDEEN, DALLAS, TX 75230—(214) 691-4925.

Phone not always attended so call nites & weekends too. Avoid early morning.

*Liebhartz sensitivity exceeds that in old bleeper gradiometer by 12(L)/1(B)Δ(L).



**YES I WANT THE
WHOLE STORY ABOUT
COMMERCIAL DIVING**

**Commercial
Diving
Institute**

151-19 POWELLS COVE BLVD.
WHITESTONE, N.Y. 11357

**Please send me complete FREE infor-
mation package on careers in com-
mercial diving. (or call (212) 767-7800)**

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

circle #199 on Reader Service Card

my shoulder and pointed ahead. There, sailing majestically across the keel some 20 feet ahead of us was the sand tiger. On this foray he elected to circle us several times and finish his inspection from a mere ten feet. As expected, he then turned away and was lost in the gloom off to starboard.

A huge school of barracuda inhabits the wreck and soon after the anchor is lowered young barracuda often will swarm to the surface to greet the boat. The adults bide their time and mingle with the divers during descents and ascents, exhibiting their insatiable curiosity.

Vying for living space are many amberjack weighing from 20 to 90 pounds. They have come to be regarded as complete clowns as they play follow-the-leader a foot or two away, circle a diver, then barrel in on a collision course turning away at the last split second or dashing in to spoil a picture.

Divers have recovered many brass portholes and the brass letters from the name on the starboard bow and the port of registry from the stern, as well as fittings from the interior. When carefully restored the portholes emerge as a collector's dream, with clean glass and a fine luster to the frame. Letters and fittings can be returned to their original condition, giving rise to the belief that only the finest brass was used during the ship's construction.

The avid shell collector will revel in the many species to be found around and inside the hulk. Exceptionally fine species of cowries, hairy tritons, jewelboxes and lacy murex can be obtained with careful searching. Special mention must be made of the distinctive spiny oysters growing inside the wreck. They have the usual slender spines but, in addition, also have thin, threadlike spines on top with



photo/Dick Miller

broad, flat growths at the base which render them unlike spiny oysters elsewhere. Unfortunately, the spiny oyster population is diminishing as collectors, red tide and hungry octopuses take their toll.

Coral may be observed although none of the so-called reef corals are in evidence. Fire coral is non-existent. Whip, or noodle coral, can be found easily. It has the characteristics of black coral and can be polished to a high degree.

The *Bayranto* was one of ten ships lost and 25 damaged by the 1919 hurricane. Happily, all 48 members of her crew

(Continued on Page 114)

DICK JACOBY SAYS:



"Fall is the best time to save on u/w photo equipment."

SAVE!

**NIKONOS V SPECIALS
CHOOSE THE BEST FOR YOU**

Nikonos V w/35MM f/2.5 Lens...\$425.00

Bag-and-Light Combo:

Whale Bag (Packs for plane or boat

—18x12x10 - Cordura Nylon -

Protective Foam Lining - Featured

in Skin Diver) PLUS

QXL Super-Bright Underwater Light.

..... **BOTH FREE**
With purchase of Nikonos V and 35MM lens

OR

Photo Kit composed of:

—Ikelite Substrobe MC with Universal Tray, Arm and Connector.

—2 snap-on lenses from Creative

Whale: 28MM wide angle adapter

and M-5 close-up lens.

KIT PRICE (SAVE \$69.45) Only \$184.95

With purchase of Nikonos V and 35MM lens

WE HAVE IT! NIKONOS SB-102 TTL

SPEEDLITE W/CASE. Nikon's newest:

auto-dedicated to Nikonos V. ...**CALL.**

HANIMEX/IKELITE OUTFIT

Quality features in auto exposure camera and versatile strobe—both at special savings.

—Hanime 35MM Amphibian

—Ikelite Substrobe "S" with new slave connector and arm.

SPECIAL \$264.90

Hanimex 35MM Amphibian Camera only,

without strobe **Only \$159.95**

DISC CAMERA/U-W HOUSING

Dependable results for the u/w starting photographer includes Ikelite Disc Case with close-up lens, viewfinder and Keystone camera with electronic flash, auto film advance.

SPECIAL \$84.95

"Disc U/W Photography" — complete, easy, step-by-step book **Only \$4.95**

EVERYDAY VALUES

Whale Bag **\$59.95**

Close-N-Wide lenses: wide angle,

1:3, 1:2 close-ups **\$129.95**

Marine Eye 28MM lens adapter ... **\$69.95**

Red Eye 24MM wide angle adapter **\$99.95**

Wide Eye 20MM

wide angle adapter **\$199.95**

Creat Strobe CS-56 for Nikonos V

or IV-A with arm and tray **\$159.95**

ALL OFFERS EXPIRE NOV. 3, 1984

Prices do not include shipping

VISA - MASTERCARD - AMEX

IN CONTINENTAL U.S.A. - CALL

800-323-9483

Call 312-231-3301 in Illinois, Hawaii, Alaska

**The
Creative
Whale**

**THE UNDERWATER PHOTO
CAPITOL OF THE WORLD**

940 E. Roosevelt Rd., West Chicago, IL 60185

circle #200 on Reader Service Card

U.S.S. GREGORY

WW II/Korean Conflict
Destroyer Still Under
Attack Beneath
California waters
off San Clemente Island

Northwest
Harbor



Pacific Ocean

San Clemente
Island

U.S.S. X
Gregory

Pyrami
Cove

BY STEVE GILES AND BONNIE J. CARDONE

General MacArthur's famous line, "Old soldiers never die, they just fade away," comes to mind when I think of the USS *Gregory*. Launched and commissioned in 1944, her first battle assignment was Iwo Jima. This was literally a baptism by fire: For a month she provided support for the landing forces with her five, five-inch guns, all the while withstanding constant attack.

Next, she was sent to Okinawa. Here, on the evening of April 8, she was the tar-

get of three Japanese kamikazes. Two of the planes were shot down and the third severely crippled. This last, however, managed to slam into the *Gregory* amidships. Temporary repairs were needed to stem the flow of water into her forward engine and fire rooms and her WW II career was over; she sailed for San Diego 11 days later. For her service in this war she was awarded two battle stars.

The next several years were uneventful for the 376 foot long, steel hulled destroy-

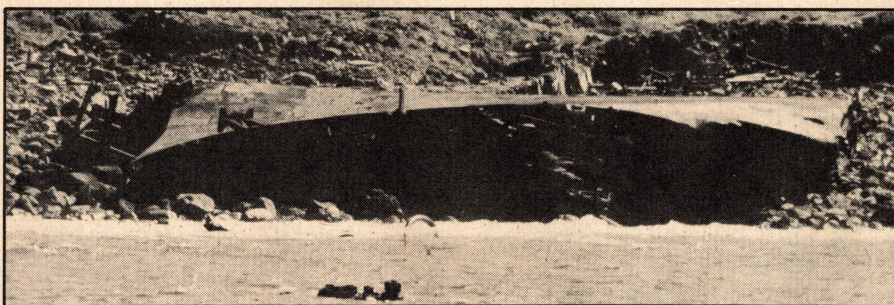
er. But, when the U.S. entered the Korean Conflict the *Gregory* was once again ordered into the thick of the action. For two years she patrolled the Korean coast and eventually was awarded four more battle stars for her efforts.

From 1953 to 1964 the *Gregory* was part of the peace time Navy. She was decommissioned in San Diego and in 1966, renamed the *Indoctrinator*. She became a training ship, allowing recruits to learn the ropes and become accustomed to

The USS *Gregory* was a 376 foot long destroyer launched in 1944. She served in World War II in Iwo Jima and Okinawa and in the Korean Conflict. Decommissioned and used as a target off San Clemente Island, CA, she was blown apart. Part of her lies on the shore, other structures in shallow water nearby.



photos/Bonnie J. Cardone



being on a ship while it was safely and securely tied to a dock.

In 1972 the Navy found a new use for its old sailor: Towed to one of California's Channel Islands, San Clemente, she became a target used for air attack practice. She was literally blown to pieces.

Today the Navy is no longer interested in the *Gregory* but she has become an exciting wreck dive. She is easy to find because part of her wreckage lies on shore between Mail Point and Lost Point

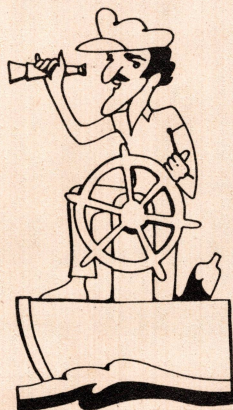
on the backside of the island. This is also the windward side of Clemente and since the *Gregory* is in shallow water (no deeper than 20 feet), she should be dived only on calm days. Otherwise the surge makes the site resemble the inside of a working washing machine.

When the wind is absent and the waves lie down, a jump on the *Gregory* is a memorable experience. El Nino current and the storms of '83 eliminated her kelp forest. Now the massive pieces of

her superstructure and engine provide dramatic photographs. And, because she is infrequently dived, she still yields wonderful brass artifacts, often polished by wave action and gleaming like gold underwater. My treasures include a turn-buckle and a small shackle. On one trip there was so much brass about we were forced to make choices instead of just grabbing everything in sight.

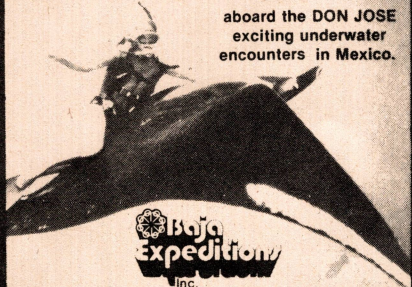
If "Old soldiers never die," neither do old sailors... 

WHERE TO GO



DIVE the Sea of Cortez

aboard the DON JOSE
exciting underwater
encounters in Mexico.



P.O. Box 3725-SD, San Diego, CA 92103 • 619-297-0506

WORLD WAR II WRECKS DISCOVERED OFFSHORE DAYTONA BEACH

JOIN US ABOARD BOTTOM TIME THIS SEPTEMBER FOR VIRGIN WRECK DIVING OFFSHORE DAYTONA BEACH. BE AMONG THE FIRST TO SEE WW II CORSAIR AIRPLANES, LIBERTY SHIPS, AN ANCIENT SAILING SHIP, A LOST BLUE HOLE, AND MANY OTHER FANTASTIC DIVE AREAS. THIS WILL BE THE FIRST TIME THAT DIVERS ALL OVER WILL BE ALLOWED TO VISIT THESE EXCITING WRECKS. ONLY THREE TRIPS WILL BE OFFERED AND SPACE IS LIMITED TO TWELVE DIVERS.

GROUPS/INDIVIDUALS
BOTTOM TIME ADVENTURES
P.O. BOX 030100
FT. LAUDERDALE, FLA 33303
(305)524-8352

LITTLE CAYMAN

Rated by "Undercurrent" as the Caribbean's best diving.
Little Cayman's prestigious resort.

The SOUTHERN CROSS CLUB features:

- complete SCUBA facilities.
- personal service (10 divers maximum).
- private cottages on a blue lagoon.
- complete AP diver's package.
- sailing, windsurfing, bird-watching.
- world-class bonefishing.

For brochure: SOUTHERN CROSS CLUB
c/o Merchants Travel
11 So. Meridian St.
Indianapolis, IN 46204
(317) 267-7970

FABULOUS FLORIDA KEYS

- Choice of 5 Different Dive Trips
 - Air Fills
 - Equipment Rentals
 - Efficiencies in Tropical Setting
 - Sailing-Skiing
- LOOKOUT LODGE RESORT 87770 Overseas Hwy,
Islamorada, Fla. 33036 Tel.: 305/852-9915

PENNEKAMP DIVE PACKAGE

experience the natural beauty of the coral reefs
while staying in luxurious bayfront condo.

\$52.00 per person, per day
4 person occupancy.

(does not apply to weekends or holidays)

- includes • deluxe accommodations
• boat trip to Pennekamp
• 2 tanks, pac, Btl & wts

5 DAY BONUS PACKAGE

pay for 4 days, get the 5th day free
for further details contact:

Capt. Slate's Atlantis Dive Center
51 Garden Cove Dr. -A-
Key Largo, FL 33037
(305) 451-1325 (305) 451-3020

Capt. Slate's



Anchorage Resort
& Yacht Club
P.O. Box 566
Key Largo, FL 33037
(305) 451-0500



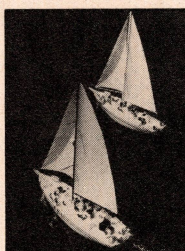
Members of Keys Assoc. of Dive Operators

SAIL DIVE THE BAHAMAS

ABOARD THE SEA EXPLORER
or MORNING STAR

Our 65' custom sailboats
are fully Coast Guard
approved and certified
to carry 22 passengers
in complete comfort.

- Departures from Miami
- 4 days or 7 days • Meals,
liquor, fishing, air and tanks
included • Fully air-
conditioned • Custom
charters available

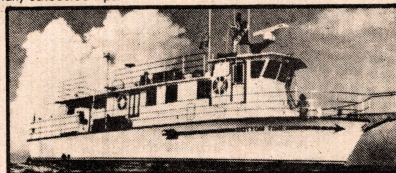


Blackbeard's CRUISES

P.O. Box 66-1091, Miami Springs, FL 33266
Toll Free (800) 327-9600 Florida (305) 888-1226

BAHAMAS Diving Adventures aboard BOTTOM TIME

Join us aboard BOTTOM TIME to explore remote dive areas unreach-
able by land based resorts and experience the freedom and comfort
available only on this floating dive resort. Exumas, Bimini, Nassau,
Freeport, Berry Islands, and all the islands between are on our regu-
larly scheduled trips.



"The only way to see the Bahamas"

BOTTOM TIME ADVENTURES

P.O. Box 030100, Ft. Lauderdale, FL 33303
(305) 524-8352

FILMED & DIVED BY COUSTEAU.

WEST
END
DIVING

"BILLION
GALLON
LAKE
RESORT"



BONNE
TERRE
MINE

WORLD'S
ONLY
UNDERGROUND
DIVE RESORT

FEATURING:
• 100' + VISIBILITY
• 1-HR SOUTH OF ST. LOUIS
• YEAR ROUND 62° AIR TEMP
• 58° WATER TEMP
• GUIDED UNDERWATER TOURS
FOR RESERVATIONS CONTACT

WEST END DIVING • 11215 NATURAL BRIDGE RD.
ST. LOUIS, MO 63044 • OR CALL 314-731-5003
BECOME A DEEP EARTH DIVER!!

CoCo View ROATAN

7 NIGHTS \$449

Modern Beachfront Facility • Fine
Food • Friendly Atmosphere • Un-
limited Diving • The Resort for Divers
1-800-282-8932, Florida (813) 973-0651
US Office: 1713 Pasco Rd., Wesley Chapel, FL 34249



BAYRONTO

(Continued from Page 111)

were saved although not all members left the stricken ship together. One boat containing 11 men got away September 11. A fishing smack found them and they were brought ashore in Tampa ten days later. Another boat with 19 aboard got off the same day and was picked up by S.S. *Calno* and offloaded several days later in Charleston, SC. The last crew members, including Captain Everett, left the ship shortly after midnight on the 13th and managed to make their way to Havana, Cuba four days later. A United States Coast Guard spokesman affirmed that no Coast Guard cutter or station was asked to give assistance to the *Bayronto* in saving lives or property.

CRAIG/NAUI

NAUI has appointed Nick Craig to the newly created position of consumer services coordinator. Craig will be working in the directorate of industry relations, as part of the strong technical team serving NAUI's increasing membership and affiliated Pro Facilities.

Craig has been a commercial/construction diver, a retail scuba manager and a NAUI instructor. He brings to NAUI five years of experience in professional photography. He is a Coast Guard licensed captain. He will be coordinating and developing consumer support for NAUI members and pro facilities nationwide.

PRINCETON CANADIAN CENTRE

Princeton Tectonics has opened a Canadian Distribution Centre at 489 Brimley Rd., Unit #24, Scarborough, Ontario M1J 1A3. Sales representatives for Princeton Tectonics, Canada are: Terry Ross (Eastern Canada), Brian Edwards (Alberta) and Ray Contreras (B.C.).

ACCIDENT MANAGEMENT COURSE

The University of Southern California's Catalina Marine Science Center is offering an emergency management of diving accidents course September 17-21. There will be discussions of past experiences and established procedures with hands-on demonstrations. Areas emphasized will include patient assessment in the field, helicopter transportation, chamber treatment, recognition of decompression sickness and air embolism, life support during transportation and others.

The course can be taken for units of USC continuing education credit. Contact the Hyperbaric Chamber, Catalina Marine Science Center, P.O. Box 398, Avalon, CA 90704.

TABATA TUSA FIN



advanced,
lightweight
and comfortable-
but no pussyfoot

BY JIM WALKER

Some years back when Joe Namath first wore white shoes (cleats) on the football field he was widely criticized. At that time anything but basic, boring black was considered showboating. Well, the idea caught on and now most football players wear white cleats.

In recent years divers have been faced with a similar choice—whether or not to break with the past and opt for a little color and flash (a little showboating if you will) in their dive gear. And, the increasing popularity of underwater photography has tipped the scales in favor of eye-catching apparel.

In the case of the Tusa dive fin from Tabata, advanced design and materials have been combined with good looks. There's hardly any choice to make—better looking is just better.

The Tusa fin has a whitish, translucent blade. It will stand out against dark, mid-water backgrounds in photographs and complements the rest of a diver's outfit regardless of color. The Tusa foot pocket and heel strap come in black, bright yellow or light blue to further complement what the diver is wearing (even the letters

TUSA, on the blade, are color matched). The buckles are black on all styles.

The Tusa fin blade is made of low density polyethylene. This material is beneficial in three ways. First, it's lightweight. (The pair of Tusa fins I tested weighed only three pounds, 6.5 ounces. My regular fins weigh five pounds, 12 ounces.) This allows the fin to have a long, effective blade without being cumbersome. The second benefit of the blade material is that it is impervious to the effects of ozone and ultraviolet light. It's also just plain tough. The blade can be scratched by contact with coral, rocks, etc., but that's about all. The third benefit of the blade material is that its flexibility and resiliency allow a hydrodynamic design which maximizes thrust and minimizes resistance and leg fatigue. The fin is vented, curved slightly, ribbed and ridged for smooth thrust without cavitation.

The Tusa blade is both thermo and mechanically bonded to the foot pocket, in effect creating a one piece fin. The foot pocket is made of a softer polyethylene material which Tabata describes as being "comfortable as a slipper."

The neoprene heel strap is secured by non-corrodible Delrin buckles that are extremely easy to operate. The clasp of the buckles snaps over and pinches the ribbed strap into the guide in the manner of a weightbelt buckle.

Care of the Tusa fin is simple—just give it a quick rinse in fresh water after your diving day and keep it away from high temperatures. The buckles on the heel strap should be opened when the fin is not being used as they pinch the strap very tightly. A plastic form is provided with each fin and should be placed in the foot pocket during storage to prevent the pocket from taking a temporary set which could reduce comfort.

I found the Tusa fin to be comfortable. It provides all the thrust a diver can use without any foot cramping or excessive leg fatigue. The pair I tested had a black foot pocket and went well with my predominantly black wetsuit (I've never been in the forefront of fashion).

The Tusa fin retails for \$50. One fin size, accommodating a wide variety of foot sizes, is available at this time. Try it on at your Tabata dealer. 

DIVER'S DIRECTORY



Advertising rates: \$129.00 for three consecutive ads, \$222.00 for six consecutive ads, \$336.00 for a full year. DEADLINE: 28th of 3rd month prior to publication. PAYMENT MUST ACCOMPANY COPY. Send all material to: Diver's Directory, c/o Direct Response Advertising, P.O. Box 69910, Los Angeles, CA 90069.

ALABAMA

MCWHORTER ENGINEERING CO. 205/836-2814
P.O. Box 9014, Plant 1053, Gadsden Rd., Birmingham, AL 35213
Rebuilds, parts, accessories, ASME coded.
HP air compressors, units, systems, since 1952.

ARKANSAS

BULL SHOALS LAKE BOAT DOCK 501/445-4424
on Bull Shoals Lake, P.O. Box 348, Bull Shoals, AR 72619
PADI instr. available. Full service dive shop, air station.
Houseboats, pontoons and all other boat rentals available.

LAKESHORE DIVE CENTER 501/362-8838
Heber Springs Marina, Hwy. 110 W., Heber Springs, AR 72543
Air, sales, service,
rentals, 2 compressors.

MIKE'S PRO DIVE SHOP 501/246-4310
25 I.P. Circle, Lake DeGray, Arkadelphia, AR 71923
Air, rentals, salvage, complete sales & service, dive trips,
spearfishing. 10 min. off I-30, Arkadelphia, AR.

RICK'S PRO DIVE-N SKI SHOP, INC. 501/753-6004
4701 J.F.K. Bl., (N. Park Mall), N. Little Rock, AR 72116
Arkansas' only PADI 5 star training facility. Dive boat,
camera rentals., dv. vacations. We teach 8 PADI specialties.

CALIFORNIA

AQUATICS OF SANTA BARBARA 805/964-8689
5370 Hollister Ave., Ste. 3, Santa Barbara, CA 93111
Channel Islands Charter, rentals, sales, repair, air.
Instruction: Basic, refresher to advanced courses.

ARGO DIVING SERVICES 213/510-2208
314 Metropole, P.O. Box 1201, Avalon, CA 90704
Guided underwater tours and instruction by
Jon Hardy on Catalina Island. Free information.

CATALINA DIVERS SUPPLY 213/510-0330
Avalon, Catalina Island, CA 90704
Rentals, sales, air, 2 locations.
Pleasure Pier and Avalon Underwater Park.

GUCCIONE'S SCUBA HABITAT 714/594-7927
3220 Brea Canyon Rd., Diamond Bar, CA 91765
Sales, service, PADI training facility, air, rental, dive
charters. Corner of Brea Canyon & Diamond Bar Bl. at 57 fwy.

NATIONAL SCUBA REPAIR, INC. 714/847-4386
16642 Gothard St. 'A', Huntington Beach, CA 92647
Exclusive AMF-Voit parts distributor. Professional
repair for shops and individuals, PADI 5 Star facility.

PASADENA DIVERS WEST 213/796-4287
2695-A E. Foothill Bl., Pasadena, CA 91107
Sales, service, air, PADI, NAUI, instruction.
Rentals, boat trips, underwater photography, tours.

PROFESSIONAL S.C.U.B.A. REPAIR 818/769-1484
5725 Cahuenga Bl., No. Hollywood, CA 91601
Professional repair is our only business.
Servicing all makes and models of equipment since 1961.

SCUBA DUBA DIVE 818/881-4545
7126 Reseda Bl., Reseda, CA 91335
Mon-Sat: 10-7. Underwater photo specialist.
Boat trips, instruction, sales, service, rentals.

TRI-VALLEY SCUBA SCHOOL, INC. 415/828-5040
21310 San Ramon Valley Bl., San Ramon, CA 94583
Scubapro Dealer & full line of major brands.
The East Bay's 'full service' pro dive store.

WET PLEASURE 408/984-5822
2350 El Camino Real, Santa Clara, CA 95051
Formerly S. Steele's Scuba, Inc.
Major brands stocked. NAUI, PADI, YMCA lessons.

COLORADO

DENVER DIVERS SUPPLY 303/399-2877
557 Milwaukee St., Denver, CO 80206
NASDS instruction, sales, rentals, repairs.
Travel is our specialty.

CONNECTICUT

CENTRAL SALES SCUBA 203/283-5007
136 Carter Rd., Thomaston, CT 06787 Ken Mischou, owner.
Connecticut's most affordable dive shop. S1 air fills.
Classes, rentals, hydros, trips, repairs, used gear.

INTERNATIONAL SCUBA CENTER, LTD. 203/621-TANK
758 Main St., Rt. 10, Plantsville, CT 06479
CT's most complete dive center! Comprehensive year round scuba
instruction, PADI, YMCA, sales, service, rentals.

ORBIT MARINE SPORTS CENTER, INC. 203/333-DIVE
3273 Fairfield Ave., Bridgeport, CT 06605
Sales, rentals, air, dive trips, hydro, U/W photo specialists.
PADI & NAUI instruction, visual inspection. Open all year.

THE DIVING BELL 203/775-3573
782 Federal Rd., Brookfield, CT 06804
Open all year. 5 Star PADI, instruction, equipment rental, hydros,
photo, repairs, gifts. Travel with Joan and John Bell.

WIN-SUM SPORTS-TRI-CITY DIVERS 203/647-8933
Colonial Corners, 27 Hartford Tpk., Vernon, CT 06066
Sales, rentals, repairs, air, hydro testing, trips,
NAUI, PADI instruction. Connecticut's largest.

FLORIDA

AMERI DIVE 305/395-4407
7166 Beracasa Way, Boca Raton, FL 33433
Del Mar Shopping Village, corner Powerline & Palmetto.
Instr., sls., rental, svcs., air, travel, resorts, Scubapro, PADI.

BRENT FEINMAN'S SCUBA WORLD 'STAY WET' 305/587-DIVE
3932 Davie Bl., Ft. Lauderdale, FL 33312 305/587-7234
PADI facility, air, sales, service, rentals, dive charters,
reef trips. All levels of cert. private & group lessons.

CHARLOTTE DIVER 813/629-2722
4549 F Tamiami Trail, Charlotte Harbor, FL 33950
Full service dive shop needs investing, working partner(s).
Written inquiries only. Gulf spearfishing, wrecks & artifact divg.

CHEETAH CHARTERS 517/790-9403
1911 Adams Bl., Saginaw, MI 48602
Sail/Dive charters aboard a MacGregor 36 catamaran.
Florida/Caribbean. Miami based. Crewed or bareboat. Sleeps 6.

CRYSTAL ISLES RV RESORT 904/795-3774
Rt.4, Box 400 (CR 44), Crystal River, FL 32629
Located on Crystal River.
Dive in springs.

CRYSTAL LODGE DIVE CENTER 904/795-6798
US 19 N., P.O. Box 456, Crystal River, FL 32629
Manatee & spring diving info. Boats, sales
service, air, rooms, seafood & bar.

DIVER'S DEN/PNEUMATIC SYSTEMS, INC. 904/871-4777
4720 E. Bus Hwy. 98, Panama City, FL 32404
Sales, rentals, service, fast charter boats, 6-15 passengers
Instr. NAUI, PADI. Compressor sales, service, maint., overhaul.

DIVER'S DEN 305/595-DIVE
12614 N. Kendall Dr., Miami, FL 33186 305/473-9499
8280 State Rd. 84, Davie, FL 33324
PADI 5 Star instruction, sales, service, rentals, trips, air, photo.

DIVERS UNLIMITED 305/981-0156
6023 Hollywood Bl., Hollywood, FL 33024
Awarded #1 training facility by PADI. All brands, whsl/rtl, daily boat
trips, repair, rntl., classes, travel. 5 Star PADI training facility.

DIVERS UNLIMITED/FORT LAUDERDALE 305/462-5555
440 Seabreeze Bl., Ft. Lauderdale, FL 33316
Daily boat trips, training dives, classes, retail-all brands, leisure-
wear, rentals. Packages w/Days Inn. 5 Star PADI training facility.

DIVERS UNLIMITED/MARATHON 305/743-7262
Mile Marker 53, Holiday Inn, Marathon, FL 33050 800/327-2740
Daily boat trips, training dives, classes, retail-all brands, leisure wear,
rentals. Packages with Holiday Inn. 5 Star PADI training facility.

DIXIE DIVERS, INC. 305/461-4488
1717 S. U.S. 1, Ft. Pierce, FL 33450 305/283-5588
1843 S.E. Federal Hwy., Stuart, FL 33494
PADI 5 Star facilities, open 7 days, charters.

EAGLES NEST-ONE STOP DIVING 305/361-6611
Rickenbacker Causeway, Marina Biscayne, Key Biscayne, FL 33149
53' custom, a/c dv. boat 'Sea Eagle', 21' U-drive dv. boats, snkl.
trips, dockside air fills, equip. rntl., sls. Ocean resort pkgs. avail.

GINNIE SPRINGS, INC. 904/454-2202
Rt. 1, P.O. Box 153, High Springs, FL 32643 800/874-8571
Six 72" clear blue springs, camping, canoeing.
Complete resort dive facility. Cavern instruction.

GULF STREAM DIVER SCUBA CHARTERS 305/965-7878
2315 Caroma Ln., West Palm Beach, FL 33406
Palm Beach daily reef & wreck dives, pro. charters,
Bahama boat trips. 2 new USCG 38' & 41' cust. dv. boats.

LAUDERDALE DIVER 305/GO-SCUBA
1334 S.E. 17th St., Ft. Lauderdale, FL 33316 "On The Causeway"
Complete master diver program. PADI distinguished service
award. Instr., sales, svcs., air, photo, trips. Widest selection.

MAC'S DIVING CHARTERS & SCHOOL 813/442-9931
2126 Drew St., Clearwater, FL 33575 813/461-7160
Daily reef & wreck trips. Dive the famous Blackthorn.
One of the worlds largest divg. stores & school. Indoor heated pool.

MANATEE HEADQUARTERS 904/795-2776
P.O. Box 124, Crystal River, FL 32629
3 day certification, Manatee tours.
Full service dive shop, special Sheraton Motel rates.

MIAMI U.S. AQUANAUTS 305/545-9000
677 S.W. First St., Miami, FL 33130
Export, diving school, authorized
Cressi-Sub dealer, air fills, rentals.

NAUTILUS DIVE, SURF & SKI
877 E. Palmetto Park Rd., Boca Raton, FL 33432 305/368-0555
2700 E. Atlantic Bl., Pompano Beach, FL 33062 305/943-DIVE
2104 W. Oakland Park Bl., Ft. Lauderdale, FL 33311 305/735-6227

NORINE ROUSE SCUBA CLUB OF THE PALM BEACHES
4708 N. Dixie Hwy., West Palm Beach, FL 33407 305/844-2466
A membership club for certified divers.
Dive trips 6 days a week.

PLANTATION INN MARINA 904/795-5797
P.O. Box 1093, Crystal River, FL 32629.
Instruction, rentals, boats, canoes, pkg. deals, pvt. Manatee obser.
deck and air sta. at Divers Giant Spring. Golf, tennis, 150 rooms.

PROFESSIONAL DIVING SCHOOL/CHARTERS OF FLORIDA
Bahai Mar Yachting Center, Ft. Lauderdale, FL 33316
Basic-divemaster training/specialties-night, deep, wreck.
Daily reef & wreck dives. 800/722-DIVE 305/761-3413

SEAPRO SCUBA CENTER OF PALM BEACH 305/844-DIVE
U.S. 1 at 37th St., Riviera Beach, FL 33404
Largest in Florida. Action sportwear.
Sales, classes, rentals, 5000 PSI fill station. Daily dive trips.

TREASURE CAY BEACH HOTEL & VILLAS 800/327-1584
2801 Ponce de Leon Bl., Coral Gables, FL 33134
One of the world's greatest resorts - with everything.
Complimentary snorkeling equipment, golf, tennis, 5 pools.

TREASURE COAST DIVERS 305/287-6777
413 S. Federal Hwy., Stuart, FL 33497
PADI diver training, all levels, student referral &
resort courses. 2 dive boats-1 Stuart, 1 Palm Beach.

FLORIDA KEYS

AMERICAN DIVING HEADQUARTERS, INC. 305/451-0037
Rt. 1, P.O. Box 274B, Key Largo, FL 33037 Est. 1962
Pennekamp our specialty. 2,3,4,5,6,7 day packages.
1/2 day & all day charters, instruction, SSI, PADI, YMCA.

AMERITRAVEL DIVING PACKAGES 800/551-4000
5864 Sunset Dr., Miami, FL 33143
Complete dive packages anywhere in the keys for
any budget. Individuals & groups.

BUDDY'S DIVE SHOP 305/664-4707
P.O. Box 409, Islamorada, FL 33036 MM. 79.5 @ Bud 'n Mary's
Marina. Dive aboard our 40' 'Scuba Safari' & 34' 'Free 'n Clear'.
Daily trips to Alligator Reef & Coral Gardens. Pkgs. avail.

CAPT. CHAMBERS' TRIANGLE DIVE CENTER, INC. 305/451-1805
P.O. Box 2258, Port Largo Resort, Key Largo, FL 33037
31' custom boat, 6 max. Free: guided dvs., use of U/W camera.
Dive pkgs. avail. Recommended by Undercurrents, 3/82.

CAPT. CORKY'S DIVERS' WORLD of Key Largo, Inc. 305/451-3200
P.O. Box 1663, Key Largo, FL 33037 MM. 99.5 U.S. 1 past Wendy's
Bahamas/Pennekamp, grp. rates, dive, snkl., sail, shell collect,
spearfish, PADI, SSI instr. U/W video rental. Best pkg. rates!

CAPT. SLATE'S ATLANTIS DIVE CENTER	305/451-3020
51 Garden Cove Dr., Key Largo, FL 33037 MM.106.5	305/451-1325
Dive Pennekamp on 1 of 3 cust. boats. NAUI, YMCA, PADI, CMAS instr. Air & rntls., grp. & multi-dv. disc., pkgs., gifts.	
CONDO KEY LARGO	Call collect 813/939-3612
Moon Bay deluxe 2 BR, 1 1/2 bath w/dock, sleeps 6. Near Pennekamp, dive centers, marinas and Largo cut. Scuba, snorkel, fishing, skiing. \$395 per wk. Reserve early.	
DIVE KEY WEST	305/296-3661
'Carol J', P.O. Box 2842, Key West, FL 33045	
Disc. room pkg. & grp. rates. Max. 6 divers.	
Lobster diving & spearfishing, rentals, air.	
FLORIDA KEYS DIVE & SKI, INC.	305/852-4599
P.O. Box 391, Tavernier, FL 33070	6 pass. dive boats.
A PADI scuba train. fac. Checkouts, 4 day cert. course & all levels of instr. Spearfishing, shelling, watersports.	
FLORIDA KEYS HOUSEBOAT	305/451-4199
20' Robalo dive boat. Luxuriously furnished 46', a/c, color TV. At private island. Dive Pennekamp, Alligator Reef, Looe Key Matecumbe Drop Off. \$695 a week, sleeps 6.	
HALL'S DIVING CENTERS & RESORTS	305/743-5929
1688 Overseas Hwy., Marathon, Keys 33050	
2 mid key locations; MM 48 Marathon, MM 53 Key Colony Beach. Reef trips, lessons, certifications, package & group rates.	
HAWK'S CAY RESORT & MARINA	US 800/327-7775
MM 61, Marathon, FL 33050	FL 800/432-2242
Tennis, pools, jacuzzis, reef trips, PADI.	305/743-9000
Custom-built dive boats, air/equip. rental, instr., pkg. rates.	
HOLIDAY ISLE DIVE & SWIM CENTER	305/664-4145
P.O. Box 482, Islamorada, FL 33036	FL-800/432-2875
22 Passenger Boat.	US-800/327-7070
Group rates.	
HURRICANE AQUA-CENTER - CAPT. ED DAVIDSON	305/743-2400
10800 Overseas Hwy., Marathon, FL 33050	
New location. Same deep discount prices. USDivers. Personalized dive/snorkel trips and instruction.	
KEY LARGO LUXURY ACCOMMODATIONS	305/255-4556
P.O. Box 161414, Miami, FL 33116	
2 bedroom/2 bath, waterfront home with dock, fully furnished, sleeps 4-6. From \$370/week.	
KEY LARGO LUXURY CONDO	513/984-0866
Oleinik, 8555 Blue Cut Ln., Cincinnati, OH 45243	
Luxuriously decorated, 2 bedroom, dock, pool, sauna, tennis. Minutes from best dive areas.	
KEY LARGO VACATION RENTAL	404/424-9308
S.D. Lewis, 1808 H Ashborough Way, Marietta, GA 30067	
Boat dock, ramp, beach, comfortable A/C accom., kit., all amenities, best diving & fishing areas. \$350/wk.	
KEY SEA CENTER	305/872-2319
P.O. Box 515, Big Pine Key, FL 33043 MM29.5	
Dive Looe Key, custom dive boat, free air w/trips. Rentals, sales, PADI instruction.	
LADY CYANA DIVERS	305/664-8717
P.O. Box 1157, Islamorada, FL 33036 MM 85.9	
Daily reef trips aboard our 40' custom dive boat.	
Rentals, air, sales, service, instruction, group rates, packages.	
LOOE KEY REEF RESORT & MARINA	305/872-2215
P.O. Box 509G, Ramrod Key, FL 33042 MM.27	
Singles, doubles, tv, pool, jacuzzi, restaurant, ramp, dockage. Compl. dive shop, instr., USCG cert. custom dive boat, grp. rates.	
PENNEKAMP STATE PARK CONCESSION	305/451-1621
Box 13M, MM 102.5, Key Largo, FL 33037	800/432-2871
The only dive shop located directly in Pennekamp. Free brochure, send 50c for reef chart.	
ROCK REEF RESORT	305/852-2401
P.O. Box 73, Key Largo, FL 33037 MM. 98	
Divers Paradise, spacious grounds, beach, jacuzzi, comfortable accommodations and comfortable prices.	
SANDLEWOOD LODGE	305/743-4922
12501 Overseas Hwy., Marathon, FL 33050	
TV, air conditioned, refrigerator, budget rates, free ramp & dockage.	
SCUBA KEY WEST-CAPT BILLY	305/294-0660
c/o Reef Raiders Dive Shop, MM 4.5, US #1, Key West, FL 33040	
Dive the Sambos, Ten Fathom Ledge, WW II wrecks, USS Wilkes Barre. Every dive an adventure.	
SEA DWELLERS SPORTS CENTER	305/451-3640
99850 Overseas Hwy., Key Largo, FL 33037	
Dive and snorkel Pennekamp Park. Special weekday rates.	
SEA TRAIL MOTEL	305/852-8001
Rt. 5, P.O. Box 91, Key Largo, FL 33037, MM 98.5	
Cable TV, air conditioned, refrigerator, budget rates, 10% discount. Advanced reservations May through Nov.	
SEAFARER RESORT MOTEL	305/852-5349
P.O. Box 185, Key Largo, FL 33037 MM. 97.8 (Gulfside)	
'Fantasy Island' setting, real sandy beach & free boats. Clean rooms & efficiencies, 10% discount & group rates.	
STEPHEN FRINK PHOTOGRAPHIC	305/451-3737
P.O. Box 19A, Key Largo, FL 33037 MM 102.5	
Complete U/W photo services.	
Photo tours and instruction.	

STEVE KLEM U/W GUIDE SERVICE	305/451-1831
P.O. Box 1803, Key Largo, FL 33037 MM. 104	
Dive with the legendary 'Pied Piper of Pennekamp Park'. Let Steve introduce you to his U/W pets. 6 divers only.	
THE DIVING SITE & CORAL LAGOON RESORT	US 800/634-3935
12399 Overseas Hwy., Marathon, FL 33050	FL 800/821-9155
Daily reef trips, 40', 34', 26' dive boats, charters, grps. 305/289-1021	
PADI lessons, sales, repair, effc. apt., pool, tennis, packages.	
THE REEF AT MARATHON RESORT CLUB	US-800/327-4836
P.O. Box 871, Marathon, FL 33050	FL-800/432-4200
2 BR/2 BA villas, efficiencies, motel rooms, tennis, pool, clubhouse & marina. Dive pkgs. & rntl. boats avail.	

GEORGIA

DIVERS SUPPLY	912/474-6790
5208 Mercer Univ. Dr., Macon, GA 31210	
PADI training facility, best deal & service. Located at exit 2 on I-475	
DIVING WORLD USA	404/634-4354
2945 Buford Hwy., Atlanta, GA 30329	
All brands, wholesale, retail, repair, rental, trips. YMCA, NAUI, PADI classes. 3 man chamber.	
THE DIVE SHOP U/W EDUCATORS	404/432-5574
2175 Old Concord Rd., Smyrna/Atlanta, GA 30080	
PADI 5 Star complete diver educators.	
Scubapro, US Diver, sales, service, rental, air.	

HAWAII

ALOHA DIVE SHOP-KOKO MARINA	808/395-8882
Hawaii-Kai, Honolulu, HI 96825	808/395-5922
'Gateway to Hanauma Bay'	
Scuba resort cert., tours, boat, sales, rental, NASDS, PADI.	
AMERICAN DIVE HAWAII	808/732-2877
P.O. 88161, Honolulu, HI 96815	
PADI 5 Star, member DVI, boat trips, Laua tubes, wrecks, submarine, dive trip pkgs. Oahu, Maui, Kona.	
AQUATICS KAUAI	808/822-9213
733 Kuhio Hwy., Kapaa, Kauai, HI 96746	808/822-9422
PADI training facility, daily tours, sales, rentals. Photography and video taping of dive trips.	
CENTRAL PACIFIC DIVERS	808/661-8718
780 Front St., Lahaina, Maui, HI 96761	
Daily diving trips, 5 islands, submarine dives. 5 day scuba classes. Undercurrent #1 recommendation.	
CUSTOM DIVE SERVICE	808/572-1412
P.O. Box 1056, Paia, Maui, HI 96779	
Personalized charters, instruction. Molokini walls, drift dives, lava tubes, So. Kihei coast & Lanai.	
DAN'S DIVE SHOP, INC.	808/536-6181
660 Ala Moana Bl., Honolulu, HI 96813	
Daily catamaran scuba tours for novices, snorkelers. Since 1971, free info, jet ski, water ski, scuba repairs.	
DIVE MAKAI CHARTERS	808/329-2025
P.O. Box 2955, Kailua-Kona, HI 96740	Priv. PADI instr.
Write/call Tom Shockley, Lisa Choquette, Jan Brinkman. Fascinating, fun charters. Dvg. w/ a difference, we care!	
DIVE MAUI INC.	808/667-2080
Lahaina Market Pl., Lahaina Luna Rd., Lahaina, HI 96761	
Full service NAUI, PADI, SSI facility. Daily boat scuba & snorkel tours, picnics, free maps, photography avail.	
FATHOM FIVE DIVERS	808/742-6991
P.O. Box 907, Koloa, Kauai, HI 96756	
Specializing in small personal charters, daily trips. NAUI and PADI instruction, air, rentals, photography.	
GOLD COAST DIVERS-OUR 6TH YEAR	808/329-1328
75-5669 D Alii Dr., Kailua, Kona, HI 96740	808/329-9266
Longest in Kona. Largest hdqts. for all watersports. PADI cert. class incl. 8 open water dives. Open daily.	
HAWAIIAN CLEARWATER	808/879-6596
P.O. Box 627, Kihei, Maui, HI 96753	
Colorfully Hawaiian and uniquely exciting. A naturalist view. Small, independent, a personal diving experience.	
HAWAIIAN DIVERS	808/845-6644
2344 Kamehameha Hwy., Honolulu, HI 96819	
Hawaii's largest full-service sport diving center. Come to the shop where the locals go!	
HAWAIIAN WATERCOLORS	808/879-3584
P.O. Box 616, Kihei, Maui, HI 96753	
Experts in dive charters, U/W video, U/W photography. Contact Ed Robinson for information.	
KONA COAST SKIN DIVER	808/329-8802
75-5614 Palani Rd., Kailua-Kona, HI 96745-1780	
The one stop dive shop, professional experience since 1968. Write for free color brochure, map and pkg. tours info.	
'KONA EXPLORER' DIVING ADVENTURES	808/329-4189
P.O. Box 5283, Kailua Kona, HI 96745	808/329-5795
For the active diver/photographer, send for brochure of our day, multi day, bluewater charters.	

LAHAINA DIVER'S INC.	808/661-4505
710 Front St., Lahaina, Maui, HI 96761	
Dive the Cathedrals of Lanai or the drop-offs at Molokini.	
MAUI DIVE SHOP	808/879-3388
P.O. Box 1018, Azeka Place, Kihei, HI 96753	
Send for free Maui Diver's Guide, enclose \$1 postage. Dive charters to Molokini, rentals, 5 day scuba classes, windsurfing.	
OCEAN ACTIVITIES CENTERS	808/879-4485
P.O. Box 1082, Kihei, HI 96753	
2 dive boats, daily trips, small groups. Molokini, La Perousse, Kahoolawe, Lanai.	
SANDWICH ISLE DIVERS/NIGHT DIVE HAWAII	808/329-9188
73-1263 Lihau St., Kailua, Kona, HI 96740	213/990-0551
Small charters. Experienced Kona skipper, instructors. Daily trips, night dives, instruction, PADI.	
SEA SAGE DIVE CENTER	808/822-3841
4-1378 Kuhio Hwy., Kapaa, HI 96746	
Safely serving Kauai since 1973. NASDS, NAUI, PADI. Daily boat/shore trips. Complete pro facility.	
SOUTH SEAS AQUATICS	808/538-3854
1050 Ala Moana Blvd., Honolulu, HI 96814	808/538-3856
Dive the Mahi, 165' shipwreck, and lava tubes! Daily boat charters. Full service pro dive store since 1961. Write for free brochure.	
THE DIVE SHOP OF KIIHEI LTD.	808/879-5172
1975 S. Kihei Rd., Kihei, Maui, HI 96753	
Daily dive & snorkel trips. 3-5 day scuba class. Nikonis/strobe rental, sls., rentals, air, repairs, night dives.	
THE MAUNA KEA BEACH HOTEL	800/228-3000
Located on the Big Island of Hawaii. Unique scuba vacations available year round. Call or see your travel agent.	
WAIKIKI DIVING, INC.-WAIKIKI DIVING SCHOOL	808/922-7188
2 Waikiki stores, 420 Nahua St., Honolulu, HI 96815	808/955-6099
Also 2025C Kalakaua Ave., PADI & NAUI facility. Boat dives, sales, rentals, charters, free brochure.	

ILLINOIS

BLUE HOLE DIVE SHOP	309/676-1852
4817 W. Farmington Rd., Peoria, IL 61604	
Offering customers all major brands since 1969. Call us anytime for information or prices.	
THE GEAR BAG, INC.	312/637-3467
1605 N. Newland, Chicago, IL 60635	
NAUI-pro facility. Sales, rentals, service, lessons.	
UNDERSEAS SCUBA CENTER	312/833-8383
626 N. Addison Rd., Villa Park, IL 60181	
Sales, service, rentals, instruction, cameras. PADI five star training facility.	

INDIANA

SCUBA LAKE MICHIGAN CHARTERS	219/287-2223
Capt. Ernie Piotrowski, 234 N. Albert St., S. Bend, IN 46619	
Dive aboard Sea Quest 1. Club/shop rates, rentals. Special Thur. & Fri., 5-tank charters, discount program.	

LOUISIANA

SEA HORSE DIVING ACADEMY	504/246-6523
5400 Crowder Bl., Unit E, New Orleans, LA 70127	
PADI training facility, classes; beginner-Instructor. Full service pro shop, indiv. & group vacations.	

MAINE

AQUA CITY SCUBA	207/873-0266
11 Water St., Waterville, ME 04901	
Sales, air fills, in-shop repair service, rentals. NAUI & PADI cert., instructions, Poseidon, USD, Sherwood, etc.	
TOMMY'S HARDWARE-TOMMY'S DIVE SHOP	207/772-5357
273 Congress St., Portland, ME 04101	
N.E.'s largest, known coast to coast, sls., svcs., rntls., air, hydro. YMCA, NAUI, PADI instr., mail order, charters, disc. prices.	

MARYLAND

DIVERS DEN, INC.	301/668-6866
8105 Harford Rd., Baltimore, MD 21234	
Maryland's oldest professional dive shop. Large enough to serve you, small enough to know you.	
DYNAMO DIVE SHOP	301/474-6380
8906 Rhode Island Ave., P.O. Box 1019, College Park, MD 20740	
N.C. wreck dives, scuba club, full service dive shop. PADI 5 Star, instruction, 24 hour wetline: 345-DIVE.	

MASSACHUSETTS

CAPE COD SKINDIVING SCHOOLS	617/996-9312
39 Main St., P.O. Box D-2, Fairhaven, MA 02719	617/992-2662
Full time service, sales, scuba instruction, repairs, hydrotesting, boat dives.	
DIVING ENTERPRISES OF CAPE COD, INC.	617/432-9035
815 Main St., Harwich Port, MA 02646	
Sales, service, air, professional instruction.	
2 USCG approved diveboats and captains.	
LOWELL SCUBA CENTER	617/453-7574
477 Gorham St., Lowell, MA 01852	
Full service pro store, instruction all levels.	
Authorized Scubapro dealer.	
NORTHEAST SCUBA, INC.	617/774-7296
125 Liberty St., Danvers, MA 01923	
Scuba instruction, sales, air station, photo courses.	
Hydro test, regulator repairs, rentals, boat charters.	
SHIP MATE DIVE SHOP & CHARTER SERVICE	617/385-8782
Sesuit Harbor, E. Dennis, MA	
Sales, rentals, repairs, charters, instruction, air.	
Wreck diving our specialty.	

MICHIGAN

MACOMB DIVE SHOP, LTD.	313/774-0640
28869 Bunert, Warren, MI 48093	
Equipment sales, repair & rentals, charter boat.	
Caribbean trips, U/W photo. equip., PADI train. facility.	
SCUBA NORTH, INC.	616/947-2520
13258 W. Bayshore Dr., Traverse City, MI 49684	
NAUI instruction, rentals, repairs, hydro's,	
3500 PSI, charter boat, trips, Dacor, USD, Scubapro.	
SPUD'S UNDERWATER OUTFITTERS	313/363-2224
2579 Union Lake Rd., Union Lake, MI 48085	
Scuba, Achilles boats, rentals, tours,	
NAUI pro facility, quality instruction since 1959.	
WOLF'S DIVERS SUPPLY	616/983-1008
1207 Ann St., St. Joseph, MI 49085	
Discount prices, USD, Dacor, Ikellite, Parkway, Tekna, Mares,	
SeaQuest, Offshore. PADI instr., air rntl., repairs, hydros.	

MINNESOTA

THE SUPERIOR DIVER, INC.	218/724-6655 or 475-2550
1905 Greysolon Rd., Duluth, MN 55812	Larry Sand & Bill Merrill
Shipwreck diving charters in the Isle Royale National	
Park aboard the 'Royale Diver' & 'Superior Diver'.	

MISSOURI

BONNE TERRE MINE-BILLION GALLON LAKE RESORT	
Park and Allen St., Bonne Terre, MO 63628	314/731-5003
Fully illuminated underground lake, 1 hour from	
St. Louis. 70° visibility, 58° water temperature.	
WEST END DIVING CENTERS, INC.	
11215 Nat. Bridge Rd., Bridgeton, MO 63044	314/731-5003
11004 Manchester Rd., St. Louis, MO 63122	314/822-3005
403 Sonderen, St. Charles, MO 63376	314/946-5300

MONTANA

THE SPORTSMAN & SKI HAUS	406/755-6486
40 E. Idaho St., Kalispell, MT 59901	
Full dive shop, PADI instruction, sales, service, air,	
rentals, very competitive equipment pricing.	

NEW HAMPSHIRE

LAPORTE'S SKINDIVING SHOP	603/763-5353
Rt. 103, P.O. Box 53, Newbury, NH 03255 (Lake Sanapee)	
Sales, service, rentals, air, salvage, friendly information.	
5 Star PADI store, certified instruction, same location 27 yrs.	

NEW JERSEY

CEDAR GROVE DIVERS SUPPLY	201/857-1748
492 Pompton Ave., Rd. 23, Cedar Grove, NJ 07009	
National certified instruction, private or group lessons.	
Indoor heated pool, full service dive shop.	
DOSIL'S SPORTS CENTER-MANNY AND MARY'S	201/787-0508
Rt. 36, E. Keansburg, NJ 07734	
Discount prices, rentals, air 3000 PSI,	
indoor pool, instructions, repairs.	

EAST COAST DIVING SERVICE	201/591-9374
Spring Valley & Texas Rds., Morganville, NJ 07751	
N.J.'s only PADI "5 Star" training facility.	
Sales, repairs, air, rentals, trips. Rts. 9 & 18	
PRINCETON AQUA SPORTS	609/924-4240
306 Alexander St., Princeton, NJ 08540	
PADI training facility. Instruction, sales, air,	
service, rentals, NJ wreck dives, dive vacations.	
SUB-OCEAN SERVICES	201-437-8683
340 Broadway, Bayonne, NJ 07002	
Air, rentals, instruction, sales, services.	
Serving the metropolitan area.	
TRITON DIVERS-OF LONG BEACH ISLAND	609/494-4400
44th and Blvd., Brant Beach, NJ 08008 Open all year.	
Disc. sls., NAUI instr., air, repairs, wreck dives from 70'	
Black Whale & 50' Deborah C. Deb Whitcraft - Capt. Bob Yates.	
UNDERWATER DISCOVERY, INC.	201/270-9100
2716 Rt. 37 East, Toms Rivers, NJ 08753	
Come and see the professionals!	
Owned and operated by Commercial Divers.	
UNDERWATER SPORTS	201/843-3340
Rt. 17, South Rochelle Park, NJ 07662	
New Jersey's oldest and largest pro dive shop.	
Indoor heated pool, Nat'l Certification, all serv.	

NEW MEXICO

RANDY'S SCUBA SALES	505/763-7657
117 E. 7th, Clovis, NM 88101	
PADI instr. & training fac., air, sls., rntl., repair, trips.	
Most complete pro service in eastern New Mexico.	

NEW YORK

AQUA CRAZY HARVEY	212/743-0054
3179 Emmons Ave., Brooklyn, NY 11235	
At Sheepshead Bay. Instant refills.	
Major brands, big discounts. Since 1953.	
AQUA-LUNG CENTER, RICHARDS	212/947-5018
233 W. 42nd St., Times Square, New York, NY 10036	
Export agent for all major brands. Dive, surf, swim.	
Largest all year round dive shop. Will not be undersold.	
CENTRAL SKINDIVERS DISCOUNT CENTERS	Open 7 Days
2608 Merrick Rd., Bellmore, NY (indoor pool)	516/826-8888
160-09 Jamaica Ave., Jamaica, NY	212/739-5772
Refills, rentals, repairs, dive trips, PADI lessons. Our 33rd year.	
EAST COAST DIVING, INC.	212/979-6056
1500 Hylan Bl., Staten Island, NY 10305	
Classes: Beginner, Advanced, Specialty. Full service	
PADI facility. Wreck charters on our 50' dive boat.	
ISLAND SCUBA CENTERS, INC.	516/546-2030
74 Woodcliff Ave., Freeport, NY 11520	
Sales, air, rentals repairs, waterfront store, travel.	
Instruction, photo equip, rentals, Club Aquarius.	
KINGS COUNTY DIVERS CORP.	212/648-4232
2417 Avenue U, Brooklyn NY 11229	
Authorized Scubapro dealer.	212/934-4153
Brooklyn's full service pro shop.	
NIAGARA SCUBA SPORTS	716/875-6528
2048 Niagara St. (near Hartsell), Buffalo, NY 14207	
Western New York's full service pro dive shop.	
PADI 5 Star facility. Scubapro & other major brands.	
PROFESSIONAL DIVE TRIPS, INC.	212/332-9574
3662 Shore Pkwy., Brooklyn, NY 11235. Capt. Bill Reddan	
Abroad 40' M/V Terry, USCG licensed, full equipment,	
wreck's, lobster, night dives, advanced courses, YMCA, PADI.	
WESTCHESTER DIVE CENTER & SCHOOL	914/937-2685
62 Westchester Ave., Port Chester, NY 10573	
Northern Division, Mahopac, NY	914/628-1386
Area's most comprehensive year round scuba school.	
ZODIAC WATCH CO., FACTORY REPAIR CENTER	212/490-3525
565-5th Ave., New York, NY 10017	
Dive watch repair center. Sea Wolf, Aquadive, all brands. Hueur,	
Chronosport, Aquastar, Hamilton dealer. Huge discounts.	
NAGS HEAD PRO DIVE CENTER	919/441-7594
P.O. Box 665, Nags Head, NC 27959	
Wreck U85, schooners, WWII freighters, tankers, aboard Sea Fox.	
50' custom boat, PADI instr., sales, svcs., rntls., air, 5000 PSI.	
OLYMPUS CHARTERS	Washington D.C.-301/474-6380
P.O. Box 486, Morehead City, NC 28557	800/368-2712
Dive the clear warm waters of NC on area's finest dive	
boat. Groups up to 25 or individual walk-ons.	
RUM RUNNER DIVE SHOP	919/758-1444
2717 E. 10th St., P.O. Box 3157, Greenville, NC 27834	
NAUI pro facility, Scubapro dealer, Fathom. Sales,	
rental, air, repairs, underwater photo, vacation adventures.	

NORTH CAROLINA

WATER WORLD MARINE SERVICES, INC.	919/596-3000
135 Miami Bl., Durham, NC 27703	
Complete scuba equipment sales, service, rental.	
Extensive PADI & NAUI training services, trips.	

OHIO

LONG LAKE SCUBA	419/331-3483
3160 Long Rd., Lima, OH 45807	
PADI certified instructor, sales, service, rentals.	
Hours: Mon.-Sat. 9-7, Sun. 12-4	

OREGON

DOLPHIN AQUATIC SPORTS	503/245-6152
11527 SW Pacific Hwy., Portland, OR 97223	
Sls., rntls., repairs, air 5000 psi, travel agency, wkly trips.	
Beg., specialty & instr. courses BSAC, PADI, IDEA, CMAS.	

PENNSYLVANIA

DON COOK'S SCUBA EQUIPMENT	717/326-2091
940 Market St., Williamsport, PA 17701	
Air, certified instruction, PADI, sales, service.	
PADI training facility, pro dive shop. Closed Wednesday.	
HARRISBURG SCUBA CENTER, INC.	717/561-0517
991-A Peppers Ln., Harrisburg, PA 17109	
5 PADI certified instructors, sales, service, rentals, air, dive	
trips. PADI training facility. Weekdays 6 PM-9 PM, Sat. 9-5.	
JOLLY ROGER DIVE SHOP, INC.	717/866-5535
P.O. Box 250, Richland, PA 17087. Full service.	
Hours: Jan.-Mar./Mon.-Wed., by appt. Thurs.-Sun. 10-8	
March 31-Dec. 31/7 days per week & holidays, 8:30-8	
LEISURE OPTIKS, INC.	215/348-2956
20 E. Court St., Doylestown, PA 18901	800/523-6528
PA's center for prescription dive masks and	
swim goggles. Call or write for information.	
MID-ATLANTIC SCUBA CENTER	
318 E. Butler Ave., Ambler, PA 19002	215/628-4935
3540 Street Rd., Bensalem, PA 19020	215/245-0141
PADI instruction, sales, rentals, repairs, trips.	
PROFESSIONAL DIVING SERVICES, INC.	412/274-7719
1135 Pittsburgh St., Springdale, PA 15144	
Serving Pittsburgh area. Sales, service, trips,	
Achilles inflatables, U/W photo supplies.	
SMOKEY'S DIVER'S DEN	717/393-5333
412 N. Duke St., Lancaster, PA 17602	
Certified instruction, rentals, sales, service. U/W films &	
video tapes. Programs for schools, clubs & organizations.	
THE DIVING BELL, INC.	215/763-6868
681 N. Broad St., Philadelphia, PA 19123	
Special discounts for students and club members.	
Free parking on Pryn (Prine) Bearings parking lots.	

RHODE ISLAND

DIVERS WORLD (DIV. OF ALPINE)	401/885-4430 401/596-0375
754 Main St., E. Greenwich, RI & 100 Main St., Westerly, RI	
Complete sales & service. Discount prices, all top brands.	
Low rates on lessons. RI's most complete dive shop	
VIKING DIVE SHOP	401/847-4179
124 E. Main Rd., Newport, RI 02840 Rt. 138	
Air, sales, rentals, repairs, hydros, instruction.	
Wet and dry suits repaired and altered.	

TEXAS

ARLINGTON SCUBA CENTER, INC.	817/265-6712
2414 W. Park Row Dr., Arlington, TX 76013	
PADI instruction, air, sales, rental, repair, trips.	
Most complete pro service in North Texas.	
ATLANTIS DIVERS, INC.	713/937-DIVE
17352 North West Fwy., Houston, TX 77040	713/69SCUBA
Serving the divers of Houston in int. trips,	
with adv., photo & specialty instr. w/on-site pool.	
SCUBA AIR COMPRESSOR SERVICE, INC.	214/661-8695
14055 Proton Rd., Dallas, TX 75234	
New/used high PSI compressors.	
Sales, service, overhaul, parts, rentals.	
SPORT DIVER'S	713/486-1844
2402 Bay Area Bl., Houston, TX 77058	
Houston's newest PADI 5 star training facility.	
Lessons, sales, service, air, rentals, trips, since 1979.	

UTAH

THUNDER ISLAND DIVERS 801/968-9600
2520 W. 4700 S., Salt Lake City, UT 84118
Utah's only PADI 5 star training facility.
Sales, service, rental.

VERMONT

NORTHERN DIVERS INC. 802/862-3881
65 Main St., Burlington, VT 05401
NAUI/PADI instruction, sales, repairs, air, rentals.
Lake Champlain dive charters, travel services.

VIRGINIA

SEA VENTURES, INC. 703/425-7676
Fair City Mall, 9650 Main St., Fairfax, VA 22031
Northern VA's complete dive shop.
Trips, instruction, sales, rentals, repairs. NAUI, YMCA, & PADI

SKI & DIVE SHOP 703/998-6140
1543 N. Quaker Ln., Alexandria, VA 22302
Complete instruction, sales, service, local activities,
wreck diving and quality travel to Caribbean.

THE WET ONES 703/WET-1111
163 Glyndon St., Vienna, VA 22180
No. VA's only PADI 5 star facility. Instruction all
levels, sales & service, grp. & indiv. trips, photography.

WEST VIRGINIA

HUNTINGTON SPORT & COMMERCIAL DIVING CENTER
U.S. 60 & I-64 Exit 15 at Carroll's 304/529-6622
4901 U.S. Rt. 60 East, Huntington, WV 25705
Ask for Charley. 304/736-5268

WISCONSIN

ON THE ROCKS 414/854-2808
Rt. 1, Box 297, Ellison Bay, WI 54210
Air, equipment, rentals, open May-Oct. Coast Guard
approved dive boat. 27 pass. Contact by mail yr. round.

3 LITTLE DEVILS SCUBA DIVE SHOP 608/356-5866
Rt. 4, Hwy. 123, Baraboo, WI 53913 800/356-9016 & 9017
North entrance to Devil's Lake State Park.
PADI 5 Star facility, Lake Superior charter boat.

CANADA

EMERALD SEA PHOTO LTD. 604/274-9432
11551-Pelican Ct., Richmond, B.C., Canada V7E 3P3
Instruction-equip. supplied. Photo-dive cruises.
A/V production. Sales, rentals, repairs. Newsletter.

FLOAT 'N' FLAG SPORT AND DIVE INC. 416/637-DIVE
564 Plains Rd. East, Burlington, Ont., Canada L7T 2E5
Ikelite repair center. Underwater photo headquarters.
Feature Dacor, all brands sales & serv. ACUC, CMAS, PADI.

NORTHERN SHORE DIVING CENTRES, LTD. 902/429-TANK
5233 Prince St., Halifax, N.S., Canada B3J 1L8
Sales, repairs, tours, instruction, free mail order price list.
Come to N. America's best wreck diving. Phone/write today!

OCEANER RECREATION LTD. 604/738-6811
995 W. 22nd Ave., Vancouver, B.C. V5Z 2A2 Adventure vacations,
Wreck & photo explorations, Alaska, Queen Charlotte Is.,
North Coast, Vancouver Is., Strait of Georgia, grp. & indiv.

AUSTRALIA

AUSTRALIA-BARRIER REEF & CORAL SEA Ph. Int. +61-77-723022
Mike Ball Watersports, 252 Walker St., Townsville, QLD. 4810
Single or group bookings, 6 dive boats, 1-8 days.
Learn to dive holidays. PADI training facility. Telex 47320

AUSTRALIA GREAT BARRIER REEF-LIVE ABOARD BALI HAI II
P.O. Box 692, Cairns 4870 Q'land, Australia, ph. 070/545545
Dive Cod Hole, Ribbon Reef, Lizard Is., 150 mi. of outer reef.
7 & 10 day sched. depart., for indiv., groups & spec. chr.

BARRIER REEF DIVING SERVICES (079)446204
The Esplanade, P.O. Box 180, Airlie Beach, Q. 4741 Tlx: 48634
Full PADI train. facil. at Airlie & Hayman Is. Also Reef
Encounter on the Great Barrier Reef. Slis., air, mtl., etc.

CALIF. S.C.U.B.A. SCHOOLS OF AUSTRALIA 079/466-666
54 Shute Hbr. Rd., Whitsunday Is., Great Barrier Reef
Dive the Barrier Reef from \$1.6 million fast cat. U/W cameras.
Air, lessons, gear, PADI training facility.

DIVEMASTER CHARTERS Tlx: AA47384 Divemaster
P.O. Box 1450, Townsville 4810, Australia Ph: 077-741363
Ext. dive trips to Australia's Outer Great Barrier
Reef & Yongala wreck. Guar. depart. indiv. bookings.

BAHAMAS

BIMINI UNDERSEA ADVENTURES 305/564-8633
P.O. Box 4960, Ft. Lauderdale, FL 33338 800/327-8150
Compare Bahama's most economical dive packages.
Includes air fare, room, all meals, tips, 3 dives daily.

EXUMA DIVERS CO. 809/336-2710
P.O. Box 110, George Town, Bahamas
Exuma's first and finest personal diving company.
Enjoy our coral reefs or our blue holes, or both!!

FREEMPORT OCEANVIEW APTS. 203/852-9300
Omni Solo Assoc., 53 Water St., S. Norwalk, CT 06854
Fully furnished, near UNEXSO, beaches, casino.
2 BR/2 bath, \$500 4 people; 1 BR, studio, \$300. Brochure available.

SAN SALVADOR, BAHAMAS 813/983-9403
For Sale: 2.2 acres.
Beach property, virgin and unspoiled. Water & electric.
Property extends from low tide mark to a paved road.

SMUGGLER'S REST DIVE RESORT-NASSAU 303/694-0159
P.O. Box 486, Weed NM 88354 Call collect
Rsvns. and info. Large deluxe bungalows on the water.
Complete water sports and diving facility.

UNDERWATER EXPLORERS SOCIETY-UNEXSO 809/373-1244
P.O. Box F-2433, Freeport, Bahamas
Famous facility, reef trips, NAUI courses,
group rates, 18' deep tank, chamber, air.

VALENTINE'S DIVE CENTER & INN 809/333-2142
P.O. Box 1, Harbour Island, Bahamas
Dive the Devil's Backbone Current Cut, Blowhole and Plateau.
Full service shop, sailing & windsurfing instruction.

BELIZE

BLUE CREEK FARMS
2084 Cypress Bend, Florence, SC 29501
Dive & fish packages, Mayan expeditions,
jungle cruises. All-inclusive budget rates.

PARADISE • HOLIDAY • CORAL • RAMONS • MARIAH 713/530-9993
Reef Resorts, Ambergris Caye, 40' dv. boat, instr., grp./pkg.
Dive the Great Barrier Reef, Blue Hole, shallow or deep.
The Belize Connection, 12661 Bissonnet, Houston, TX 77099

PYRAMID ISLAND, CAYE CHAPEL Phone: 44190
P.O. Box 192, Belize City, Belize
Private island, excellent food & accommodations, fast dive boat.
Blue Hole, Turneffe, Barrier Reef. Best dollar value.

RUM POINT INN ON CARIBBEAN 415/752-8008
Tiley and Tiley, 1423-23rd Ave., San Francisco, CA 94122
Remote, but easily reached. Diver owned and operated. Dive
southern reef. Explore Mayan ruins, too. Most modern in Belize.

ST. GEORGE'S LODGE call direct ph. 011-501-44190
P.O. Box 625, Belize City, NAUI pro facil., 5 Star, Under-
currents 8/80, warm water cert., courses all yr. Scubapro
dealer or call Bay Travel, CA-714/675-4320 or 800/854-9303.

VILLA AVENTURA - A DIVERS VILLAGE AT CAYE CAULKER
P.O. Box 32794, San Jose, CA 95152 408/282-5460
Complete dive services for groups and individuals.
TF 800/538-6802, telex 296627 Camptel SNJ.

BRITISH VIRGIN ISLANDS

AQUATIC CENTRES-GEORGE MARLER 809/494-2858
P.O. Box 108, Road Town, Tortola, BVI 800/345-6296
Full service dive facilities. Rentals, sales,
hotel packages, tours, photography, sail and dive charters.

BLUE WATER DIVERS/NANNY CAY TORTOLA 809/494-2847
Michael Royle, P.O. Box 437, Roadtown, Tortola, BVI
PADI openwater instrs., 2 dive boats, rentals, air, tours, cert.
& intro. courses, repair of equip. Rendezvous tours, dive pkgs.

DIVE BVI LTD. 809/495-5513
P.O. Box 1040, Virgin Gorda, British Virgin Islands
J.T. Giacinto NAUI #3491, PADI #6773. Instruction,
rentals, air, tours, wreck's dive packages available.

UNDERWATER SAFARIS 809/494-3235
P.O. Box 139, Tortola, BVI 800/535-7289
Rhone & reef dives daily, PADI training facility,
sales, rental, photo center, hotel dive/sail packages.

CARIBBEAN

BUCEO DOMINICANO S.A.-DOMINICAN DIVERS 567-0346
Abraham Lincoln 960, Santo Domingo, Dominican Republic
PADI training, repairs, courses, tours, snorkeling. 809/565-6116
Equipment sales & rentals, reef & deep diving. Telex: 3264399

THE DIVE SHOP LTD. 809/426-9947 or 2031
P.O. Box 44-B, St. Michael, Barbados
Daily dive trips, dive packages with
accommodation, from \$299 up.

WILLIE'S WATERSPORTS 809/425-1060 or 9238
Paradise Beach Hotel, St. Michael, Barbados
Complete dive and watersports facilities.
Wreck Stavronikita, reef and resort dives, air station.

CAYMAN ISLANDS

AMBASSADORS INN DIVING RESORT Tlx (0293) 4432 DIVEIN
P.O. Box 1789, Grand Cayman, BVI 809/949-5335
7 day packages, \$305 summer, \$354 winter dbl. occu.
Famous wall dives, native guides & special group rates.

BOB SOTO'S DIVING, LTD.-SCUBA CENTRE-SOTO'S PHOTOS
Airmail: P.O. Box 1801, Grand Cayman, BVI 809/949-2022
AM, PM, North Wall and night dives. Individual and group
packages, SCUBA/photo rentals and complete training programs.

BRAC REEF BEACH RESORT, CAYMAN BRAC
Brac Aquatics, Ltd. 305/987-8880
5920 Rodman St., Hollywood, FL 33023 800/327-3835
Wall, reefs and wreck diving packages available.

CAYMAN ISLANDER BONUS SCUBA, GRAND CAYMAN
Bob Soto's Diving, Ltd. 305/987-8880
5920 Rodman St., Hollywood, FL 33023 800/327-3835
Wall, reefs and wreck diving package available.

DIVE LITTLE CAYMAN-CAYMAN ADVENTURES, LTD. 203/438-5663
14 Rochambeau Ave., Ridgefield, CT 06877
Skin Diver Magazine calls Little Cayman "... probably the last
true virgin diving in the Caribbean" "... it's Paradise."

LONDON HOUSE CONDOS AND DIVE PACKAGE 800/327-2740
P.O. Box 1356, Grand Cayman, BVI FL 305/981-0156
Live like a millionaire & dive like a king w/Bob Soto's 809/947-4060
Diving on the beautiful wrecks & reefs of Grand Cayman. Tlx: 4472

2-BEDROOM APARTMENTS TO RENT.
Across the street from best dive resort in Cayman.
Can arrange dive package. Ask for Kent or Nancy.
Call 800/624-0220 US, 800/982-982-5836 CA, Tlx. 334-479.

UNDERSEA PHOTO SUPPLY OF CAYMAN 809/947-4686
P.O. Box 1551-S, Cayman Falls, Grand Cayman, BVI
Camera and strobe sales, rentals, repairs, instruction,
film processing, batteries and gifts. Mail orders accepted.

FAR PACIFIC

MACK'S DIVING OF JAPAN
2-18-34 Nishiki, Naka, Nagoya 460, Japan
Equipment, sales, service, rentals, air.
PADI international training facility. Pool/shop.

SEA TOPIA PRO DIVING CENTER, INC. 09889-2-5567
593 Isa, Ginowan City, Okinawa, Japan
Custom made wet suits, PADI instruction.
Sales, repair, 3000 PSI air station, indoor pool.

HONDURAS

COCO VIEW RESORT-ROATAN 800/282-8932
1713 Pasco Rd., Wesley Chapel, FL 34249 813/973-0651
\$449/7 nights. Meals, unlimited diving on famous Coco
View Wall. A beautiful & tropical resort for divers.

PIRATE'S DEN RESORT, ROATAN ISLAND 800/327-7032
US office: 8500 S.W. 8th St., Miami, FL 33144 305/261-4014
Enormous variety of dive sites, coral reefs, wrecks,
private beach, new equipment, rentals, group rates.

ROATAN ISLAND-BEACH HOUSE RENTAL 906/863-3618
Marsha Andrews, RA320 River Rd., Menominee, MI 49858
Near Anthony's Key Resort. 2 BR, deluxe, maid, private beach,
scuba, snorkel, 4 persons, \$450 per week. Brochure, reservations.

INDIAN OCEAN

ANDAMAN BEACH RESORT, ANDAMAN IS., INDIAN OCEAN
TCI P. Ltd., Chander Mukhi, Nariman Point, Bombay, India
Scuba, snorkel, windsurf, boat, tent, equip. rental LA:389-2113
Grp. rates, undiscovered paradise. Write. NY:371:8080

BALI-HOTEL BUALU NUSA DUA (HOTEL CLUB)
P.O. Box 217, Denpasar, Indonesia Tlx 35231 Bualu nd
50 rms., beautiful beach rsrt. Watersports no charge.
PADI instr., mtl., free diveboat. Dive tours of Bali.

JAMAICA

CARIBBEAN VILLAGE, Runaway Bay, Jamaica 809/973-3453
Jamaica's best divg. value! 1 wk. w/12 dvs. \$299pp/\$159pp non-
divr. 3 BR a/c seaside villas, free watersports. Walk to shops,
restaurants. On-site rentacars & tours. Scuba by SunDivers.

CLUB CARIBBEAN 800/221-4588
Runaway Bay, Jamaica 809/973-3507
Discover Jamaica's finest diving with Mike Drakulich.
Super packages. Informal, free watersports, entertainment.

CLUB CARIBBEAN/SUNDIVERS 809/973-3507 800/221-4588
Cottages in Runaway Bay, Jamaica's finest diving, beach, pool, disco, entertainment, 3 bars, gourmet restaurant, free skiing, windsurfing, sailing, snorkeling, glassbottom boat.

JAMAICA ASSOCIATION OF DIVE OPERATORS 809/973-2346
P.O. Box 212, Runaway Bay, Jamaica
Dive safely in Jamaica, dive with a JADO shop.
Contact Shawn McDermott, JADO Information Officer.

NEGRIL SCUBA CENTRE 809/957-4220
Negril Beach Club, Negril, Jamaica
Beginner lessons, dive packages, certification, photography. Beautiful, exciting dives daily with PADI instructors.

SUNBURST HOLIDAYS JAMAICA DIVE ESCAPES 800/223-1277
4779 Broadway, New York, NY 10034 212/567-2900
All-inclusive dive package to Jamaica from anywhere in USA. Charter flights + equipment + meals.

SUNDIVERS, JAMAICA LTD. 809/973-2346
P.O. Box 212, Runaway Bay, Jamaica, West Indies
Jamaica's 1st & only PADI int'l training facility.
Extensive sls. & svs., camera rentals, resort dive pkgs.

MEDITERRANEAN

CYDIVE CYPRUS 061-34271
1, Poseidon Ave., Kato Paphos, Cyprus
Dive trips, hire and air.
BSAC & PADI training courses. Also spec. courses.

DIVEWISE SERVICES, LTD. 36441
Dragonara Water Sport Centre, St. Julians, Malta
The friendly dive company. Reliable and personalized. CMAS & PADI.
Full beach club facility, sailing, windsurfing, etc.

MEXICO

AA1 SCUBA CANCUN DIVE SHOP 988/42336 & 30315 & 30111
P.O. Box 517, Cancun, Quintana Roo., Mexico 77500
Ex com. & military diver owner 30 yrs. divg. exp. NAUI, CMAS, PADI Master instr. Tours, classes, pkgs., referrals, cameras.

AQUA TOURS 988/30227
P.O. Box 528, Cancun, Q. Roo Mexico 77500 988/31137
Dive the Yucatan Reefs, daily trips to I. Mujeres, Nizuc and Cozumel. Instr., rentals, package and group rates.

BAJA EXPEDITIONS, INC. 619/297-0506
P.O. Box 3725, San Diego, CA 92103
Dive the Sea of Cortez, Baja, CA, Mexico. Unlimited diving aboard the 80' 'Don Jose'. Single and group reservations.

DISCOVER COZUMEL DIVE SHOPS
P.O. Box 75, Isla de Cozumel, Q. Roo, Mexico
Daily scuba trips to Palancar Reefs. Resort courses.
Rentals/group packages. Ernesto Vera Kentzler, owner.

DIVE PARADISE COZUMEL Tel: 2-10-07
All the popular reefs & spots, 'State of the Art' gear mtls., Eng. speaking staff, gear lockers, low grp. rates.
24 hr. rsrvs-info line US 504/271-2746

EXCURSIONES AKUMAL Uncrowded Akumal So. of Cancun.
Postal 984, Cancun, Q. Roo, Mexico
Dive the world's 2nd longest barrier reef. Fully equipped dive shop, rental, instruction, dive trips.

EXCURSIONES AKUMAL
Postal 984, Cancun, Q.R. Mexico
PADI cert. course. 3 days includes: diving & equipment, \$200.
English or Spanish. Open water & individual courses offered.

GALAPAGO INN ph: (987) 20663
P.O. Box 289, Cozumel, Q. Roo, Mexico 77600
Beach front dive resort offering Mexican hospitality and pro diving.

MULEGE DIVERS
Madero #45, Baja California Sur, Mexico
Guided underwater tours, air, service, instruction, complete equipment rental and sales.

SKINDIVERS PARADISE Club Akumal Caribe Furnished bungalow, sleeps 7. Maid service. 20' from beach. Available December 18 thru January 1; 14 days \$1400.00. Sale possible. 312/438-8420

MICRONESIA

MICRONESIA AQUATICS OF TRUK LAGOON
P.O. Box 57, Truk Lagoon, E. Caroline Islands 96942
Individual & group tours arranged for Truk Lagoon. 42' charter boat, guides, complete tour and dive service.

THE VILLAGE
P.O. Box 339, Ponape, Caroline Islands 96941
Resort hotel, restaurant, tours, spectacular diving, private thatch bungalows with waterbeds, fabulous foods.

NETHERLANDS ANTILLES

BOINAIRE-BACHELOR'S BEACH APARTMENTS 202/244-5046
c/o 2805 Battery Pl. N.W., Washington, D.C. 20016
Dive the Caribbean the relaxed and inexpensive way from your own patio & pier. Luxury furnished 1 & 2 a/c BR on the water.

BOINAIRE BEACH BUNGALOWS 599-7-8585
P.O. Box 155, Bonaire, Netherlands Antilles
Luxurious 2 BR villas, A/C, kit., fully equipped, diving, 3 minutes from downtown, 50' from reef, total privacy, reasonable.

BOINAIRE SUNSET VILLAS 011-599-7-8291
P.O. Box 115, Bonaire, Netherlands Antilles
1, 2, 3 and 5 bedroom villas, waterfront locations, a/c, kit., fully equipped, very private, competitive rates.

BRUCE BOWKER'S CARIB INN 011-599-7-8819
P.O. Box 68, Bonaire, Netherlands Antilles
Largest selection of sites, spacious rms., ocean view, A/C & pool, reef trips, air, sls., mtls., no crowded boats.

BUDDY'S DIVE RESORT 011-559-7-8065 or 8395
Breedestraat, Bonaire, N.A. 1 & 2 BR deluxe bungalows.
AC, maid, full equip. kit. From \$300 US per wk. dbl. occ.
Own dive operations, reef trips. Cheapest on the island!

TOUCH THE SEA with DEE SCARR 011-599-7-8529
c/o Touch The Sea, Bonaire, Netherlands Antilles
Personalized dive guiding, meet marine creatures, take photos, earn PADI specialty certifications, much more. (Closed October)

NEW ZEALAND

PAIHIA DIVE HIRE-CHARTER 27-551
Box 210, Paihia, Bay of Islands, New Zealand
Pro dive stores, rentals, sales, service, PADI, instruction, boat charters.

RAINBOW ADVENTURE HOLIDAYS US 800/722-2288
23241 Ventura Bl. #216, W.H. CA 91364 CA 800/227-5317
N.Z.'s Bay of Islands dive tours. 4/6 per. live aboard cruise or day diving live ashore. Combine with explore N.Z. holiday.

PHILIPPINES

CARFEL SEAVENTURE CRUISE, INC. Telex: 66801 CSE PN
1786 A. Mabini St., Malate, Manila 2801
Dive the Philippine Sea, and we will bring you to the golden Cowry colony!

DIVE CENTER PHILIPPINES INC. Ph: 86-31-94 or 87-36-46
2172-B Pasong Tamo St., Makati, Metro Manila, Philippines
PADI/NAUI instr., sales, rental, air, repair service, custom & ready-to-wear wetsuits, tours to Bonito Island resort.

PUERTO RICO

CARIBE AQUATIC ADVENTURES 809/721-0303 ext. 447
Caribe Hilton Int'l, P.O. Box 1872, San Juan, Puerto Rico 00903
Best reef divg. in San Juan. NAUI & PADI instr., sales. Enclosed reef & cave dive areas (right at hotel). 4 dives daily.

CARIBBEAN SCHOOL OF AQUATICS, INC. 809/723-4740
Condado Holiday Inn, P.O. Box 1270, San Juan, PR 00902
Since 1963. Capt. Greg Korwek, NAUI instr. #166. 809/721-1000
Dive shop, dive boats, sailing charters. Eve. 809/728-6606

LA CUEVA SUBMARINA 809/872-3903
P.O. Box 151, Isabela, Puerto Rico 00662
Complete dive shop and full service training facility.
Scuba instr., scuba tours daily, rentals, NAUI, PADI, SSI, CMAS.

VIEQUES DIVERS 809/741-8600
P.O. Box 1001, Vieques, Puerto Rico 00765
PADI training facility, windsurfing, remote island located half way between San Juan & St. Thomas.

RED SEA

AQUANAUT INT'L DIVING CENTRE, SHARM EL SHEIKH-DAHAB
c/o Travco, P.O. Box 2247, Cairo, Egypt
Diving, windsurfing, boat trips, safaris, equip., rental, skiing, PADI, NAUI, CMAS. Tel: 699452-768748

AQUASPORT INT'L RED SEA DIVING CENTRE LTD. 059-72788
Coral Beach, P.O. Box 300, Eilat, Israel 88102
Dive & windsurf the Red Sea, 7 days incl. B.B. from \$140.
PADI 5 star facil. NAUI, cruises, safaris, resort & adv. instr.

SOUTH PACIFIC

CORALHEAD DIVING P.O. Box 78, Nuku'alofa, Tonga
150 islands, extended dive trips or just a buddy for snorkeling, have it your way. US Divers equip., rental, repair, w/cascade filling for fast air. 99.999% clean air.

OCEAN VOYAGES 415/332-4681
1709 Bridgeway, Sausalito, CA 94965 Dive Fabulous Cocos Island!
Scheduled 12-day depart., only \$1495 - Nov. thru Apr. Year-round diving in exquisite Galapagos for groups of 4, 6 or 10.

REEF RESEARCH ASSOCIATES 808/732-0590
2084 Palolo Ave., Honolulu, HI 96816
Ongoing reef study in remote South Pacific locales.
Programs tailored to divers and naturalists.

SCUBA HOLIDAYS LTD. Telex: 1069 FKTOUR NH
Hideaway Island, Port Vila, Vanuatu
Specialists in all inclusive diving holidays. 3 Star CMAS/NAUI instructor. Groups or indiv. Boat, wreck, reef, night dives.

SCUBAHIRE, LTD. 361-241 or 361-458
P.O. Box 777, Suva, Fiji Islands
Day trips and extended charters aboard famous "FIJI DIVER".
Dive shop, PADI training facility, travel service, book now!

TROPICAL DIVING ADVENTURES PTY. LTD. 257429
Box 1644, Boroko, Papua New Guinea 251716
NAUI pro facility, still & video photography, tours.
Charter vessel, Papua New Guinea's sport diving specialists.

THAILAND

FANTASEA DIVERS-PATONG BEACH, PHUKET, THAILAND
P.O. Box 74, Phuket 83000, Thailand. Daily guided dv. tours.
3-7 days diving/sailing trips to Phipi & Similan Isl.
on board our own 50' sailing yacht, Andaman Explorer.

SANTANA INT'L DIVING CENTER, PATONG-BEACH, PHUKET
P. Box 79, 83 Phuket, Thailand
Daily boat excursion & safaris by 50' sailing yacht.
Rental, air, hotel rsrvs. Compl. tour & dive svs. Write now.

SEAFARI SPORTS CENTER-A PADI training facility
Pattaya Beach, Thailand Cable: Rogaden, Telex: 85909
PADI, YMCA, NAUI, CMAS pro instr. 9 cert. levels, 6 spec. CPR, ITC. Pro sls., svs., air, mtls., wreck/tropical dives. Resort accom.

SEAT CO., LTD. 235-0605-9
1175 New Rd., Opposite G.P.O., Bangkok 10500
Sole Dist. U.S. Divers equipment, Bauer compressors, Mercury marine engines and boats.

U.S. VIRGIN ISLANDS

AQUA ACTION, INC. 809/775-3275
Winterberg Peak, St. Thomas, USVI 00802
Snorkel, scuba, sailing, instruction, tours with personality. Equipment sales, service, rentals.

CARIBBEAN SEA ADVENTURES, INC. 809/773-6011
P.O. Box 3015, Christiansted, St. Croix, USVI 809/773-5922
Complete dive shop, daily tours to St. Croix's best sites aboard 40' custom dive boat. Delivered.

CHRIS SAWYER DIVING CENTER 809/775-7320
41-6-1 Estate Frydenhoj, St. Thomas, USVI 00802
Full svs. NAUI pro facil., personal svs., quality guaranteed, cruise ship pick-up at dock. Send for VI divg. info packet.

DIVE EXPERIENCE, INC. 809/773-3307
P.O. Box 4254, Christiansted, St. Croix, USVI 00820
40' dive boat, wall dives! Night dives, PADI instr., 24 hr. #, Hotel pkgs. Dive the best, dive the USA-USVI.

JOE VOGEL DIVING CO.-EX-UDT Center: 809/775-7610
P.O. Box 7322, St. Thomas, USVI 00801
Oldest cert'd divg. school in USVI. Joe conducts all scuba instr., day & night, wreck dives & snorkel tours. U/W photo. Trip pkgs.

SEA SHADOWS SCUBA 809/778-3850
P.O. Box 505, Cane Bay, St. Croix 00820
Full svs. center @ Cane Bay. Air, mtls., sls., instr. & tours of spectacular drop-off walls of the north shore.

UNDERWATER SAFARIS OF ST. THOMAS 809/774-1350
Yacht Haven Marina, P.O. Box 8469, St. Thomas, USVI 00801
Sail & dive packages, daily & weekly rates, rentals.
Scuba instr., tours daily, reef & wreck dives, hotel pkgs.

WINDWARD ISLANDS

ANSE CHASTANET SCUBA ST. LUCIA 800/328-5285
P.O. Box 216, Soufriere, St. Lucia, West Indies Telex: 0398/6370
Dive packages, accom., bars, restaurant, snorkel, resort courses, air, rental. Complimentary windsurf, sail, tennis. 809/454-7354/5

JIM & CATHY CHURCH
test new **FUJI FILM**
next month in
skindiver

Information by the handful. These feature loaded HI-TECH gauges by Dacor are engineered for maximum performance, dependability and, most important, accuracy. Just grab hold underwater, and at a glance you'll find out your depth, air pressure, maximum depth for the dive, water temperature, location and direction. Depth gauge has new "Zero-In" reset screw on side for barometric compensation, color coded depth zones and red maximum depth needle. The TAG-2 pressure gauge has a large, luminous scale that reads to 4500 PSI with reserve indicator. Built in temperature gauge quickly reacts to water or air. Three gauge console features an oil filled compass with phosphorescent needle, lubber lines and rotating bezel. The new console housing is a rugged shock-absorbing rubber specially formulated for years of use. Six-inch size console makes it easy to grip and 360 degree swivel gives you quick access to any of the six functions. See your Dacor dealer for demonstration...and a handful of information.

A. Model 3333-00 — 3-Gauge Console (compass on opposite side)

B. Model 3332-00 — Two-Gauge Console

C. Model 3125-00 — Single Wrist Depth Gauge

Optional: All available with metric calibrations.

Send \$2.00 for Dacor Diver Kit.

Includes catalog, cloth patch, decomp. table decals.



A complete line of quality

DACOR HI-TECH GAUGES

Instruments by which to gauge all others



DACOR CORPORATION

161 Northfield Road, Northfield, IL 60093, Phone: (312) 446-9555

circle #201 on Reader Service Card

COMPLETE DIVING SYSTEMS. FROM THE PEOPLE WHO GAVE YOU DIVING.

For more than three decades, U.S. Divers has brought you one diving innovation after another — the Aqua-Lung® self-contained breathing apparatus, the single hose regulator, diving cylinders, K&J valves, wet suit and BC jacket.

Now comes the ultimate innovation: the complete diving system. Everything from Aqua-Lung systems to zippered suits. In three full product lines. All carefully coordinated in form, fit and function. All available in the latest contemporary colors, styles and designs. So you can mix and match BC jackets, gauges, cylinders, fins or entire suits



Captain Cousteau wearing one of his original Aqua-Lung® systems which he co-invented. As Chairman of the Board, Captain Cousteau has been the guiding force behind U.S. Divers leadership in the market.

and always look professional. And all rigorously tested to meet the high standards we built our reputation on. A reputation that started 35 years ago.

U.S. Divers. Your number one source for professional diving systems. From the people who started it all. Write for our free '84 catalog today. U.S. Divers, 3323 W. Warner, Santa Ana, CA 92702. Telephone (714) 540-8010 TX 67-8414.



U.S.DIVERS®

Division of U.S.D. Corp.

